BRITAIN'S LONGEST RUNNING AMIGA MAGAZINE

AMIGA COMPUTING

May 1991 Issue 36 £2.95

That's all folks!

Create your own 'toons without going loony

Exclusive: MED v3.00

On this month's free disk – it's the BEST PD music program

Expand and deliver!

Realise your Amiga's full potential

Modem operandi

Comms as fast as you can afford

NEW! Easy to use replacement for Amiga Workbench

See Pages 70-71

05
9 770959 963008

PLUS: Games • DTV • Machine Code • Music • Comms • Amos

POWERFUL EASY TO-USE. STATE-OF-THE-ART.

ATARI ST and PC Versions available very soon.

The Animation Studio is the only full-featured animation and paint program to utilise state-of-the-art cell animation techniques that are characteristic of Disney-style animation.

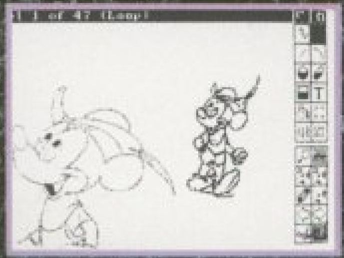
Powerful enough for the professional, yet simple enough for the novice, The Animation Studio gives you the ability to create or enhance full-length animated sequences.

NOW YOU CAN HAVE TOTAL CONTROL OF CLASSIC ANIMATION FEATURES

• **Onion Skin:** This exclusive Disney feature lets you produce animations by seeing through three previous cells.

• **Exposure Sheet:** This powerful feature allows you to order the cells any way you want and control the timing of each.

• **Music and Sound Effects:** Add sound, music, speech and cartoon special effects to your animations.



• **Ink &Paint:** Bring colour to your animation.Use the dither option to create more than 4096 colours and superimpose on background pictures!

• **Basic & Advanced Animation Techniques:** Learn techniques such as Squash and Stretch, Arc of Motion, Inbetweening and Path of Action. Learn how to go from rough concept to finished animation-complete with colour and sound!

Includes:

• Sample Disney animations for you to study and modify.

• Actual animations taken from classic Disney films.

• A fully coloured animation prepared with The Animation Studio.

• 2 precise instruction Books

Available Now:
Amiga® version for all Amiga machines 512K required. 1 meg recommended.

Distributed by
NATHAN SOFTWARE

For more information or support please call 0268 541 212

SILENT SOFTWARE, INC.

Produced by Silent Software Inc, and Walt Disney Computer Software, INC.
Designed by Reichart Von Wolfshield.
Written by Leo Schwab.

DISNEY SOFTWARE

THE COVERDISK

Page 34

MED v3.00: SUPERB Utility Of The Month. Quite simply THE BEST EVER music program for the Amiga – and it's FREE! Includes sampling software, sample editing, and in-built sound synthesiser! Dare you miss this month's coverdisk?

Amiga-Tanx: A brilliant COMPLETE game of top quality. Action-packed, with disgracefully good graphics and digitised sound, this has to be one of the most addictive coverdisk games of all time.

The Graphics Ripper: Ever wished you could draw? Gone green with envy at someone else's super sprites? Now you too can grab some graphics glory with The Graphics Ripper.

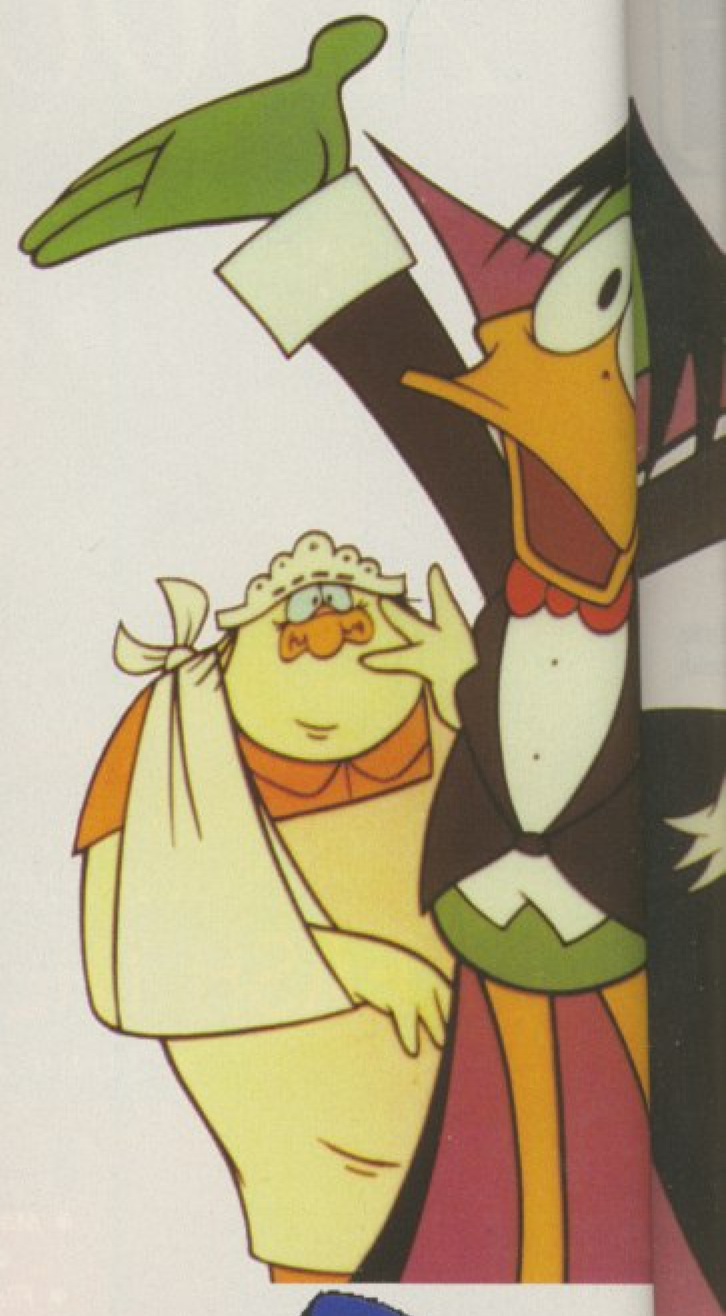
LandScape: A unique CAD-style program for all the budding gardeners. Allows you to design your garden in 3D without having to go near a spade!

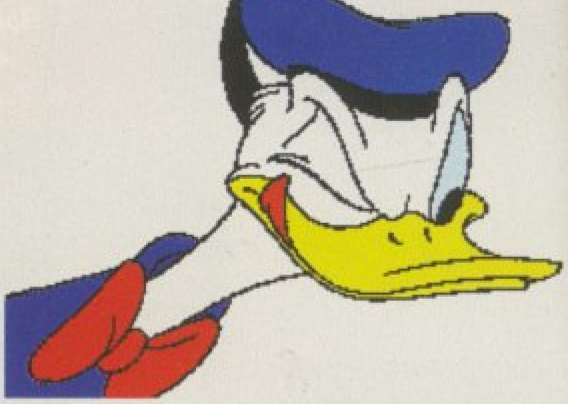
PsionLink: Make your Amiga talk to a Psion Organiser with this first ever Amiga-to-Psion communications program. Exclusive to Amiga Computing!

PPType: Easy to use printing program which will print normal files and those crunched with PowerPacker! Essential for those who want a hard copy of coverdisk documents.

AutoScript: Example program from our CLI beginners' series. This neat little script file will create a bootable disk in your extra drive!

COVER STORY





WHO'S WHO

MANAGING EDITOR: Derek Meakin
PUBLISHER: Richard Williams
FEATURES EDITOR: Eddie McKendrick
DEPUTY FEATURES EDITOR: Paul Austin
TECHNICAL EDITOR: Stevie Kennedy
ART EDITOR: Mike Bailey
CONTRIBUTORS: Jason Holborn, Don Lewis, Margaret Stanger, Peter Hickman
ADVERTISEMENT MANAGER: Tracy Carroll
ADVERTISING SALES: Simon Lees

PUBLISHED BY: Interactive Publishing Ltd
Europa House, Adlington Park, Macclesfield SK10 4NP.

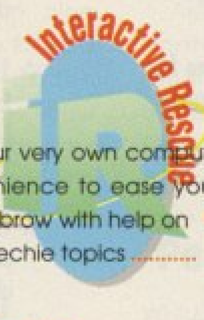
CHAIRMAN: Derek Meakin
MANAGING DIRECTOR: Hugh Gollner
COMMERCIAL DIRECTOR: David Hirst
GROUP ADVERTISING MANAGER: John Snowdon
Editorial: 0625 878888 **Advertising:** 0625 878888
Subscriptions: 051 357 2961 **Fax:** 0625 879966

News trade distribution: Comag (0895-444055)

ALMANAC

CONTENTS

REGULARS

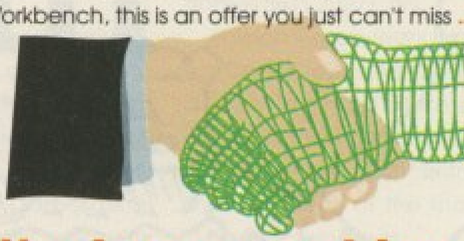


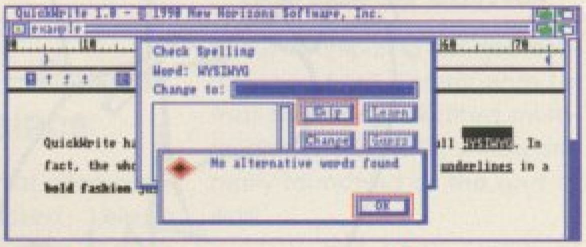
THE GAMES ZONE

Tune in to 'toons!

Get your Amiga animated with the help of *Amiga Computing's* comprehensive guide starting on Page 47

FEATURES





Great offer for new subscribers – Page 112

Presenting PROTEXT 5.0

Five years to the month after Protext version 1 was launched Arnor are pleased to present version 5, an enormous leap forward in both ease of use and performance.

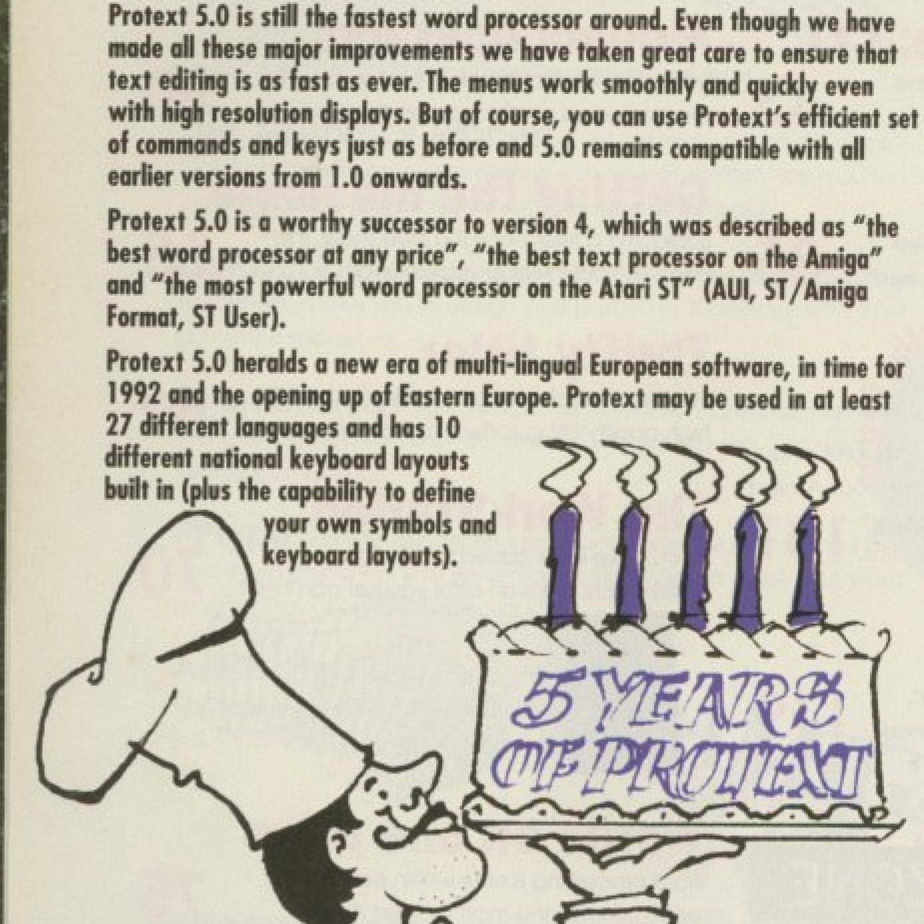
Protext 5.0 introduces a completely integrated system of pull down menus and dialogue boxes. The menus are among the many operations that may now be carried out with either the mouse or the keyboard. Protext really does give you the best of both worlds.

Protext 5.0 handles printer fonts flexibly and accurately. You can make full use of any number of proportional printer fonts, mix them freely within any line, centre them in headers, use automatically formatted footnotes. And Protext correctly formats your text as you type it, no matter how many font changes you use, showing you line and page breaks exactly as they will be printed.

Protext 5.0 is still the fastest word processor around. Even though we have made all these major improvements we have taken great care to ensure that text editing is as fast as ever. The menus work smoothly and quickly even with high resolution displays. But of course, you can use Protext's efficient set of commands and keys just as before and 5.0 remains compatible with all earlier versions from 1.0 onwards.

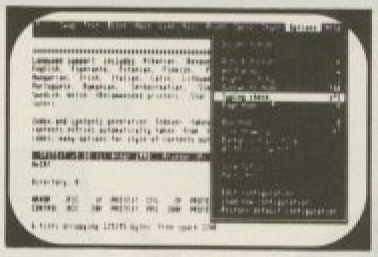
Protext 5.0 is a worthy successor to version 4, which was described as "the best word processor at any price", "the best text processor on the Amiga" and "the most powerful word processor on the Atari ST" (AUI, ST/Amiga Format, ST User).

Protext 5.0 heralds a new era of multi-lingual European software, in time for 1992 and the opening up of Eastern Europe. Protext may be used in at least 27 different languages and has 10 different national keyboard layouts built in (plus the capability to define your own symbols and keyboard layouts).



The Features

☆ **New fast & easy to use pull down menu system** with dialogue boxes and alerts; file selector; mouse dragging to set blocks. Menus complement existing commands and keyboard shortcuts, do not replace them. Menus may be used with mouse or keyboard. Amiga version follows Intuition guidelines.



☆ **Enhanced printing capabilities** supports multiple proportional fonts; mixing of different font sizes on the same line; proportional formatting whilst editing; side margin, headers and footers independent of main text font. Tabs, decimal tabs and centre tabs. Extensive range of printer drivers supplied.

☆ **Multiple file editing** - up to 36 files may be open; split screen editing.

☆ **Graphics mode support** on PC allows use in virtually any text or graphics mode including 132 column or 75 line VGA modes; user defined characters and on-screen bold, italics and underlining now on all versions; use of 13 different accents on any character.

☆ **Language support includes** Albanian, Basque, Czech, Danish, Dutch, English, Esperanto, Estonian, Flemish, Finnish, French, German, Hungarian, Irish, Italian, Latin, Lithuanian, Norwegian, Polish, Portuguese, Rumanian, Serbocroatian, Slovak, Spanish, Slovene, Swedish, Welsh. (Note: some printers do not support all languages).

☆ **Index and contents** generation. Indexer takes marked words or phrases; contents entries automatically taken from titles wrapped in control codes; many options for style of contents output.

☆ **Spelling checker** features completely new 110,000+ word Collins dictionary with very fast phonetic lookup. Anagrams and find word pattern. Foreign language dictionaries (German, Swedish available now, others to follow).

☆ **Many other enhancements** including multi-line footnotes and endnotes; automatic timed save; add column or row of figures; indent tabs; find word at cursor; 40 column mode support; sentence operations; inter- paragraph space; much improved expression evaluator; self incrementing variables; Roman numerals; newspaper-style column printing; file sorting utility with special options for names and addresses; revised manual plus new tutorial guide.

☆ **And don't forget Protext still includes** background printing; box manipulation; macro recording; exec files; headers and footers; find and replace; mail merging; undelete; file conversion utility; configuration program; auto reformatting; on screen help; time and date; typewriter mode; line drawing; disc utilities.

Prices

Protext 5.0 may be purchased from any good computer shop or directly from Arnor. Upgrades from earlier versions are only available from Arnor and the original discs should be returned with your order.

	PC	Amiga	ST/TT	Archimedes
Protext 5.0	£149.95	£149.95	£149.95	£149.95
Upgrade from v4.2	£60	£60	£60	N/A
from earlier versions	£75	£75	£75	N/A
Protext 4.2	£99.95	£99.95	£99.95	N/A
Prodata 1.1	£79.95	£79.95	£79.95	due 1991 Q1

Notes:

Protext 5.0 requires at least 640K of memory on all machines
Protext 4.2 requires at least 512K of memory on all machines
Prodata requires 1MB of memory on the Amiga

ARNOR

Arnor Ltd (AMC), 611 Lincoln Road, Peterborough, PE1 3HA. Tel: 0733 68909 (24 hr), Fax: 0733 67299

Amiga – Computer of the year?

TOP computer publications in both Greece and Italy have named the Amiga 500 as their choice for Home Computer of the Year in the European Computer Leisure Awards 1991. They have also chosen Amiga Vision as Multimedia Package of the Year.

Now in their second year, the awards are being run in conjunction with the European Computer Trade Show to be held at London's Business Design Centre from April 14 to 16.

This year, *Amiga Computing* is one of the official UK sponsors of the awards and we have now made our nominations in the Amiga categories. Nominated for Best Art Package is Disney Software's Animation Studio; Best Music Package, Gajit's Sequencer One; Best Home Education Package, Fun School 3; Best Home Productivity Package, Protext 5 from Arnor; and Most Innovative Peripheral, Newtek's Video Toaster.

Our nominations will join those from top magazines in nine European countries to go forward for the final judging at the European Computer Trade Show with a glittering presentation night at London's top night spot The Hippodrome on April 14.

Budget trio launched

THREE titles are to receive the budget treatment on Digital Integration's Action Sixteen label. Previously issued at full price, Sherman M4, Kult and North & South will each sell for £7.99.

Sherman M4 is Loriciel's tank simulation featuring World War II battles, authentic tanks and weaponry and Kult is Infogrames icon-driven adventure which challenges players to solve puzzles in The Five Ordeals.

Also a former Infogrames hit, North & South is set in the American Civil War featuring battles on a variety of different levels and scenarios. Action Sixteen are on 0276 684959.

Perfectly satisfied

WHILE 1990 saw the recession start to bite for many companies, WordPerfect report that their total UK sales last year were 73 per cent up on 1989.

The WordPerfect Corporation achieved sales of $452 million for 1990 – an increase of 61 per cent on 1989. Since 1979, sales have now passed the one billion dollar mark.

'Allo 'Allo – French buy Palace

PALACE Software has gone continental. Paris-based Leisure Holding, which owns French games publisher Titus, has bought the entire entertainment software division of the Palace film and video organisation for an undisclosed sum.

No immediate changes are planned at Palace Software, which publishes titles such as Dragon's Breath and International 3D Tennis.

There are no plans for a merger with Titus, best known in Britain for games like Crazy Cars.

Palace Group managing director Chris Craib says the software division needed more specific direction than could be given by Palace, which is concentrating on the expansion of the movie and TV production areas.

Using their loaf (and berets) to get into the French mood – Palace Software staff

CDTV set to break the sound barrier

AMIGA Computing has had confirmation from Commodore UK that their long awaited multimedia system, CDTV, will be officially launched at the end of April.

CDTV has been victim of numerous prelaunch delays and ➤

Amiga helps Gulf effort?

STAFF Sergeant Waugh, of 58 Battery, 12 AD Regiment, Royal Artillery, is a happy man.

He's written to us from the Gulf where, among other things of course, he's apparently managed to continue a relationship with his trusty Amiga.

In a letter dated March 12, written in Kuwait, he expresses his thanks to Page One Public Domain who recently sent some clip art disks to him in the Gulf at his request, "after reading the review in your mag".

Sounds like *Amiga Computing* has been getting through to the Gulf, too!

All this, and a successful conclusion to the war for the Allies.

SSgt Waugh (we haven't discovered his first name yet – we'd like him to get in touch with more information about the Amiga's precise role in the Gulf) adds: "The disks are very good and great value for money, and I would recommend them to anyone who requires clip art."

Take a bow, Public Domain.

AMIGA people

WHAT'S new

industry speculation. It would now appear that Commodore are ready to bring their fledgling multimedia product to the market.

The price point has been a matter of intense speculation over the last six months. All CBM's tight-lipped public relations company were prepared to concede was that the unit would weigh in with a sub-£600 tag. Other industry sources have hinted at £399 as a probable price.

Commodore spokesman Andrew Ball also confirmed that a CDTV external drive for the A500 will be available soon. The unit, referred to internally at CBM as the A690, is expected to be available at the end of May.

The most recent demonstration of the CDTV's capability was on the BBC's Tomorrow's World science programme last month.

A new sound encoding technique developed by Roland, called RSS (Roland Sound Stage) was used during the mix-down of the Xenon II "Megablast" soundtrack, performed by Bomb the Bass.

Both Roland and Commodore claim that RSS gives the impression of aural three dimensionality. RSS places individual tracks of sound around the listener, making sounds appear wider.

The major strength of the system is that it does not require any additional hardware to be purchased. Two standard Hi-Fi speakers are sufficient.

Making movies Amiga style

TURNING an Amiga into the ultimate movie making machine is the aim of Kailash Ambwani, president of Toronto-based software developers Gold Disk, with the aid of their multimedia sequencer MediaShow.

Aimed specifically at Amiga 500 owners bent on creating presentations and desktop video productions, MediaShow allows them to combine animations, graphics, music and sound effects. It also runs on 1000, 2000 or 3000 machines and needs at least 1Mb of ram.

"The easy-to-use timeline interface and our patented multitasking engine makes creating long-running presentations and movies a reality for every level of Amiga user," said Ambwani.

Needing no additional hardware, MediaShow supports files from most paint, 3-D rendering, animation and music programs and sound digitisers. It is Workbench 2.0 compatible.

As Amiga Computing went to press UK distributors HB Marketing (0753 686000) said delivery was imminent but the price had not been fixed. Gold Disk have announced a launch price of $129.95.

Lamont lament

THOSE of you who managed to wrench yourselves away from important things like working and playing on your Amiga to listen to the Budget news on March 19 will know that the dreaded VAT has been increased from 15 to 17.5 per cent from April 1. As you'll appreciate, this is entirely due to circumstances beyond our control.

Unfortunately, it was too late for either advertisers or ourselves to take account of the change in this issue of *Amiga Computing*.

Gallery takes a break

THOSE looking for striking artistic creations from the Amiga will undoubtedly notice that our Gallery feature is missing from this issue of *Amiga Computing*.

The good news for AC's art appreciation society is that Gallery is taking a one-month break only. It will return in the June issue in all its colourful, bit-mapped glory.

A tablet for the mice

Numonics Graphics Tablet

GRAPHICS input specialists TDS-Numonics (0254 676921) have launched a new low-budget addition to their GraphicMaster series of digitiser tablets aimed at Amiga users.

Claimed to be far better than a mouse, it offers 1000ppi resolution, absolute accuracy to 0.025 cm and an output rate of 160 pps making it ideal for DTP, CAD/CAM, 3-D modelling and paint software.

GraphicMaster costs £185 for a 12" x 12" active surface and £290 for 12" x 18".

It has a choice of four button puck or pen stylus with two switches for £75 but comes with Amiga software driver and cabling free.

Operational features include user definable origin, metric/imperial units, non-volatile memory, tablet surface menu for set-up and automatic pen tilt correction.

With very low power consumption, it is run through the RS232 interface.

Beastly good news

WHEN the people of Portsmouth go for a dip in the town's new Pyramid Leisure Pool they can now enjoy live and recorded broadcasts, advertisements and public announcements on a huge video

Adolfo plays for laughs

CURRENTLY doing his bit to brighten up the often serious image of computing is Adolfo Giannini, managing director of Contriver (Europe).

"Serious computing does not mean that computing has to be boring", he claims.

"At Contriver we have recently re-designed our packaging in a way which emphasises the fun aspect of computing, using a mouse of the furry four-legged kind pushing a computer mouse round a desk.

"We are also carrying this image of fun computing through to our advertisements".

And Amiga people who fancy walking round with Plug In, Switch On and Boot Up emblazoned on their chests can take advantage of another new move from Contriver (0273 602622).

The company are offering a free Tee shirt printed with this logo to customers who buy their Five in One or Multi DPI mice.

Incidentally, Contrivers' Five in One Mouse missed the deadline to take its place with the rest in the rodent roundup in the March issue, but nevertheless it's well worth a look.

The Contriver is a cute creature that stands up well against the opposition for both styling and smoothness, the excellent ergonomic design making it a pleasure to use for long periods. If you've ever had to hover over

Adolfo Giannini – fun computing

AMIGA people

the buttons of some other rodents you'll know what a pain trying to avoid accidental clicks can be.

The resolution is easily on a par with the best of the rest. The general feel is impressive with the only real moan concerning the rather bulky multiple connection which might be useful if you're mad enough to own an ST, but if you don't, it just gets in the way.

WHAT'S new

wall affectionately known as The Beast. The little beauty which controls the beast behind the scenes is an Amiga 500 running LimeLite software from Future Software Systems (0628 24318).

The Picbloc wall was installed by Electrosonic and is controlled either by direct input from the Amiga's keyboard or by an operator generated schedule.

Through LimeLite staff can decide the time, the frequency and length and even the date when messages or announcements will appear, then leave things to the Amiga fitted with a hard disk drive.

How may tractors for your Amiga?

COMMODORE are making inroads into the growing market of Eastern Europe, and playing a leading role in this drive is American Gregory Koler, the product marketing manager of Commodore Electronics.

His efforts are recognised as one of the the main reasons for the company's sales increase of 25 per cent last year.

Outlining his successful brand of marketing expertise directly related to good customer service, Koler gave an insight into Eastern Europe at the Computer Arena conference held in Marbella.

The going is not always easy, with lack of cash hampering the developing Eastern bloc and leading to such bizarre suggestions as bartering tractors for computers, but Koler's experience is winning through.

He's a high flier, or so part of his career would suggest, since he spent 10 years leading the marketing and cabin services programmes for Qantas Airways in Australia.

Gregory Koler – high flier

Based at the Swiss headquarters of Commodore International, he is now responsible for international marketing programs in all the countries not covered by marketing subsidiaries – Finland, Turkey, Greece, Malta, Eastern Europe, Middle East, The Gulf, Africa, Pakistan and India.

"We work closely with our marketing partners to ensure that not only is the most up-to-date product always available, but that there is an infrastructure of ancillary services such as servicing, education and software support", he said.

"The continued success of Commodore in its worldwide locations is due to the close relationship of both companies ensuring that market needs are understood and met by both ourselves and our distributors".

AMIGA people

Beating up the opposition

CLAIMING to have produced the ultimate compilation, Virgin Games (071- 727 8070) say their new offering Fists of Fury includes the cream of the beat-'em-ups. For £24.99, customers get Ninja Warriors, Double Dragon II – The Revenge, Shinobi and Dynamite Dux.

X-clusive new games weekly

INTERACTIVE Publishing, the people behind some of Britain's biggest computer magazines including *Amiga Computing*, are on the verge of launching a new weekly title designed to cater exclusively for games enthusiasts.

Games-X is set to be the biggest ever computer entertainment publication launch in the UK. Over a quarter of a million copies of the preview issue are being distributed. The news-stand launch is backed up with a massive promotional campaign which includes extensive TV advertising and wide distribution of the preview issue.

The publishers claim Games-X is a new concept in computer magazines, combining "lifestyles" features with the most in-depth games coverage available.

Take a look at the preview issue bundled with *Amiga Computing* and make up your own mind. The first Games-X proper hits the streets on 26 April 1991.

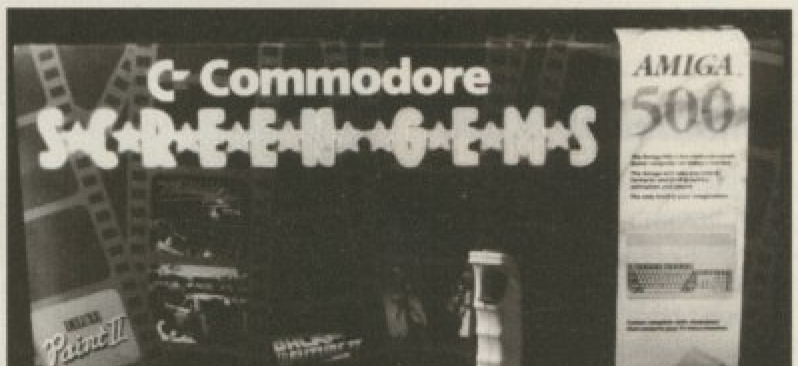
Screen Gems gets 1 meg boost

COMMODORE UK are heading off the recession by adding yet more value to their top selling Amiga "Screen Gems" bundle.

For the first time, the company is selling the A500 with one megabyte of memory whilst retaining the attractive £399 price point. The extra half meg is supplied in the form of Commodore's A501 trap-door ram expansion which normally retails at £99

The offer commenced on May 1st and runs until the end of June. When asked about the prospect of a 1 meg Amiga becoming the standard entry level machine, Commodore spokesman Andrew Ball was reserved, pointing out that the unexpanded A500 would still be on sale through the life of the promotion.

The Screen Gems package comprises an A500, modulator, Shadow of the Beast II, Days of Thunder, Nightbreed, Back to the Future II and Deluxe Paint II.



Amiga "Screen Gems" bundle

Waving a 24-pin lure

IN a move aimed at luring nine pin printer users onto 24 pin machines, Citizen (0895 72621) have cut the price of their entry level 124D 24 pin printer by 11 per cent. An 80 column model offering speeds of 120 cps in draft and 40 cps in letter quality, it now costs £249.

Mice and Scanners

PANDAAL Marketing (0234 855666) are now offering Amiga owners a new mouse and handheld scanner.

The DAATAscan Pro is a Mitsubishi scanner running on DAATAscan software offering 105mm scanning width, 100, 200, 300 and 400 dpi resolution and choice of either black and white or three dither patterns representing 64 grey scales.

Other features include contrast contol, real-time scanning display, zoom and pixel perfect editing, crop, resize, rotate, flip and invert images and full printer support.

A clipboard facility allows selectable cut, copy and paste and the scanner also supports the IFF file format. Price, £189.99.

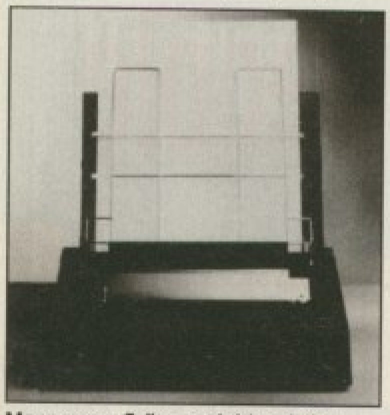
The DAATAmouse can be used with both the Amiga and Atari ST, being converted between the two ➤

WHAT'S new

machines by a slider switch beneath the mouse. Offering 280 dpi, it features two microswitched buttons with a claimed lifetime of one million cycles and an anti-static lightweight ball which can be removed for cleaning. Price, £39.99.

High quality from portable printer

THE new MT730/735 portable printer from Mannesmann-Tally uses thermal technology to print what is claimed to be high quality text



Mannesman Tally – portable printing

and graphics at a resolution of 300 x 300 dpi.

It has1MB RAM as standard and features H-P Laserjet and Deskjet, IBM Proprinter X24 and Epson LQ 850 emulations. Fonts are Corpora, Maths, Swiss and Timor.

Princing may vary, but as an example, Action Computer Supplies of Wembley are retailng it at £684.

Pricey Prestel

BRITISH Telecom has dramatically restructured charges for its viewdata information service, Prestel.

The first increase in tariffs since 1988 is a significant one. In a letter to all Prestel subscribers BT point out that inflation has risen 20 per cent since the last Prestel price increase.

Residential off-peak time charges are being increased some 10 times higher than inflation with a 200 per cent increase from 1p a minute to 3p a minute. BT claim this increase is to bring charges more in line with costs.

The standing charge for Prestel also increases, to £20 a quarter. The revamped pricing is significantly better news for members of the Micronet closed user group. The quarterly charge increases to £30 a quarter but off-peak time charges are scrapped.

In effect BT have provided two different pricing packages for their viewdata service.

Subscribers can opt to pay £20 a quarter and £1.80 an hour in off-peak time charges for access to Prestel only. Alternatively a Micronet subscription at £30 a quarter will provide greater access to the system, with the added benefit of no off-peak charges.

Kevin Smith, Micronet marketing manager commented "Our more canny users will notice how favourably the costs compare against rival services, once usage goes past one hour a month"

The message is simple. If you are a Prestel subscriber who currently pays more than £10 a month in time charges, upgrade to Micronet and avoid being caught by a rather expensive British Telecom April fool's joke.

Share a printer

A NEW device from Micro Control Systems (0602 391201) allows four computers to share the same printer. The Simple-4-Switch is available in both serial and parallel versions and can be used either automatically or manually.

Based on the MCS Simple-2-Switch, it enters automatic mode when first turned on. When data comes from a computer it locks on and passes it to the printer.

If other users try to print while the device is busy their data is frozen until the printer becomes available.

Simple-4-Switch works with all kinds of printers and plotters. Price, £129.

Billiards AD 3,000

PLAYING normal billiards can be hard enough but imagine the complexity of futuristic billiards on an eight-sided table. Amiga owners won't have to use their imagination for long thanks to French games house Infogrames (071-738 8199).

Due soon is Billiards 3D, a simulation which includes American pool, French pool and Fantasy Billiards on an octagonal table.

If that isn't enough, there are two different sets of rules for each game and they all come in either 2D or 3D. For one or two players, Billiards 3D re-creates the atmosphere of a billiard hall in which one player can vie with any of five computer opponents willing to bet thousands of dollars on one game.

Games can be saved and resumed and the mouse-controlled program allows a full range of well-simulated trick shots. Written for Infogrames by Spirit Bonanza, Billiards 3D will be available for Amiga 500, 1000 and 2000 and will cost £24.99.

Mighty Mo joins Motormouth

RENEGADE have now taken to the small screen. Magic Pockets, the Bitmap Brothers' offering due to be launched this summer, is being used for the phone-in game section of popular Saturday morning TV programme Motormouth.

With The Bitmap Kid, quickly rechristened Mighty Mo for the programme, the game has been simplified for television and is voice- activated by young viewers who ring in. First players of the TV version were presenters Andy Crane and Steve Johnson and the series will last for nine weeks.

When Magic Pockets is launched by Renegade (071-481 9214) it will feature music from the walking eyelashes herself – Betty Boo.

One more round

ACCOLADE (071-738 1376) have released their latest Jack Nicklaus accessory disc. Called Great Courses of the US Open it includes the challenges of Pebble Beach, Oakmont Country Club and Baltusrol Golf Club.

Compatible with both Jack Nicklaus' Greatest 18 Holes of Major Championship Golf and Jack Nicklaus' Unlimited Golf and Course Design. Price £11.99.

Masterly touch in chess programming

WHEN you have ranked as an International Master in the competitive world of chess and you also have an interest in computing, an obvious outlet is to write chess programs.

Chris Whittington has both these attributes and has put them to good use through his company CP Software and its publishing subsidiary Oxford Softworks (099382 3463).

With 20 chess programs under his belt, Chris achieved his greatest success to date when his latest offering recently took the title World Personal Computer Blitz Chess Champion.

Running on an enhanced Amiga, the program Chess Champion 2175X claimed its impressive victory at the World Microcomputer Chess Championship held in Lyon, France.

Running alongside the World Championships for human chess players featuring top Russian stars, the computer programs played off against each other, the only human involvement being to transmit each move between the different machines.

Blitz chess is played in the usual way except that all the moves have to be completed in 10 minutes, so allowing many games to be played in a short space of time.

"Blitz chess is particularly challenging as moves have to be made very quickly indeed", said Chris. "Accuracy of calculation, chess knowledge and speed are all of prime importance and this result is a great measure of the program's performance."

In his years of competitive chess Chris reached a level only surpassed by the International Grand Master grading, but gave up competitions 20 years ago.

"If you want to be really good at chess you have to play it all the time," he said. "I stopped playing because it was taking up too much time when I had other things to do".

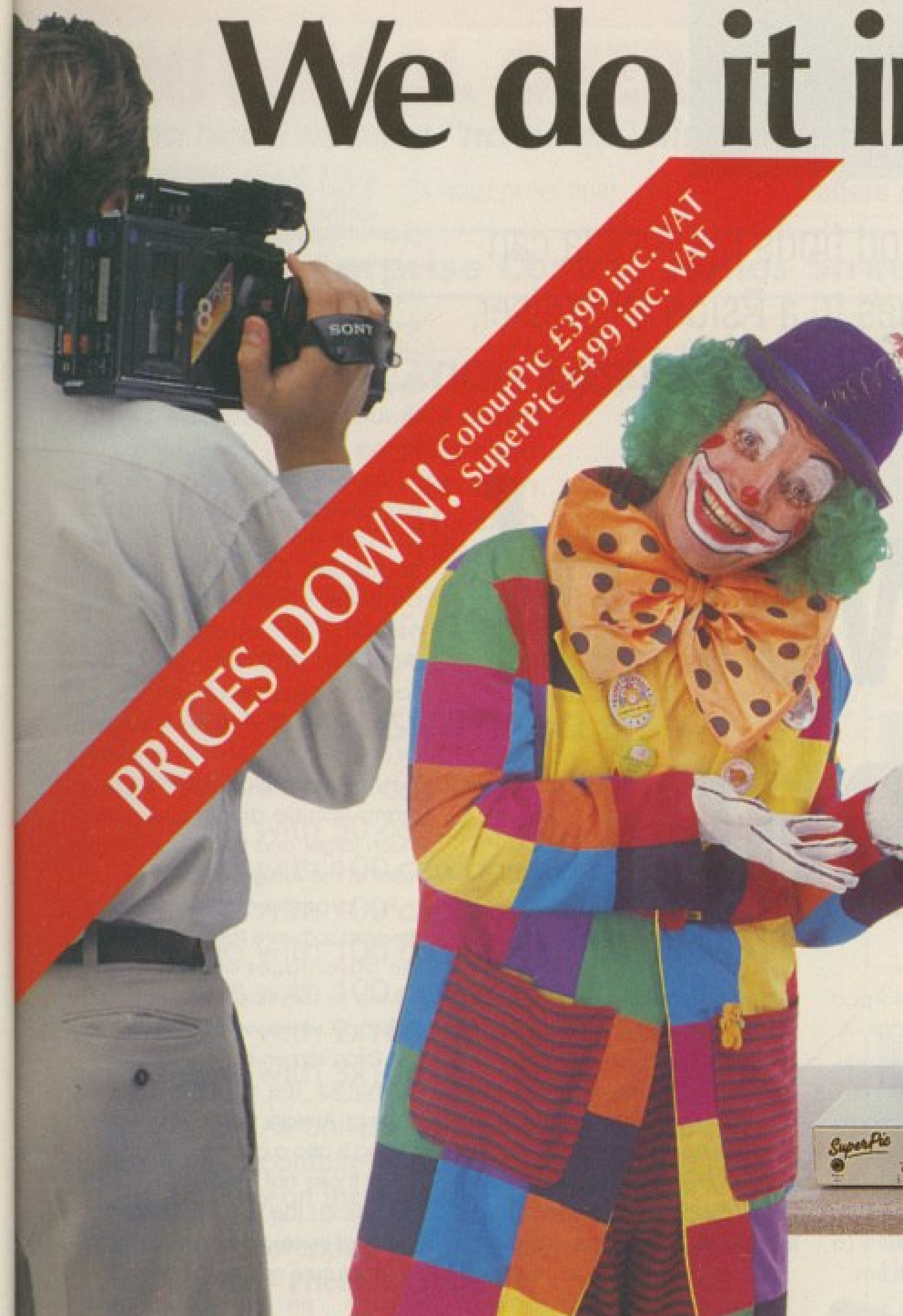
He started CP Software eight years ago and has progressively enhanced his programs.

"I used to be able to beat them, but it doesn't work like that any longer," he said. "The computer thinks further ahead. Through the program, it carries out relatively simple evaluations many hundreds of thousands of times and quite complex concepts emerge."

Chess Champion 2175 for the Amiga costs £29.95.

AMIGA people

We do it in real-time ... and in COLOUR.



Our VIDEO DIGITISERS are REAL-TIME and COLOUR. They GRAB a FRAME as fast as a TV camera can provide it, PLUS – they include a live framestore output for connecting to a second picture monitor or even a TV set to simplify focusing and setup.

Step into the real-world of real-time AND colour:
No need for a perfect freeze frame VCR!
No need for a colour splitter!
No need for a colour wheel!
Perfect pictures from a moving colour source at just the touch of a button.

With **SuperPic** and **ColourPic** you can . . .

- ★ GRAB a frame from a moving picture in 64,000 vibrant colours.
- ★ SAVE and display pictures in over 32,000 colours.
- ★ ENHANCE your DTP skills with a wide range of built in monochrome tools.
- ★ INTERFACE directly with the AIM image processing software to use its wide range of powerful image processing tools.
- ★ CREATE pictures for use in image data bases.
- ★ CREATE a picture which can be loaded into your favourite art package . . . DeLuxe Paint, Photon Paint, Digipaint . . .
- ★ PRINT to your colour or monochrome printer.
- ★ SEE your SCULPT images as you have never seen them before! Use **ColourPic** or **SuperPic** as the ultimate SCULPT display device!
- ★ DIGITISE images in HAM, interlace and overscan modes.
- ★ MULTI-TASK safely with your other software.

ColourPic – a real-time colour video digitiser for the A500, A2000 and A3000.

NEW recommended retail price £347 plus VAT (£399 inc. VAT).

SuperPic – a real-time colour video digitiser for the A500 and A2000 including a superb quality genlock for the discerning Amiga user.

NEW recommended retail price £434 plus VAT (£499 inc. VAT).

ColourPic and **SuperPic** can be obtained from selected Amiga dealers or direct from JCL. For your free show disk of pictures contact Carolyn on 0892 75791.

VISA Access EUROCARD

JCL

JCL BUSINESS SYSTEMS LIMITED
Knowle Farm Clock House, Wadhurst Road, Frant, East Sussex TN3 9EJ, England.
Tel: 089275 791 (INT) +44 89275 791. Fax: 089275 440 (INT) +44 89275 440.

Dave Westwood finds his Amiga can speek in tongues to a Psion Organiser, and with a straight face, too

Tower of Babel

It doesn't take long, when using a Psion Organiser, to realise just how quickly the DataPacks can fill up, leaving one desperate for more storage space.

In the early days pleas for help brought the Psion Comms-Link package to connect the pocket maestro to a PC, but there has previously been no easy way out for the Amiga owner.

Look no further for the answer. You will find a program on this month's *Amiga Computing* coverdisk called PsionLink which will enable you to transfer files to and from the Amiga and Organiser with ease.

Unfortunately, the Psion Comms-Link is still required to provide the hardware connection and the Psion communications software as well as the conversion of Psion's non-standard serial output to standard RS232 signals.

This shouldn't be too much of a problem, because if you're serious about connecting your Organiser to the outside world, the Comms-Link is an essential buy in any case.

Parlez-vous Amiga?

Why use a special program? You might think that with a Comms-Link pack it would be easy to transfer files to the Amiga with the help of a standard comms program, but you'd be wrong.

The high occurrence of spurious characters you get as a result of a straight transfer makes this exercise barely worthwhile, so a program to iron out the bugs soon becomes more than welcome.

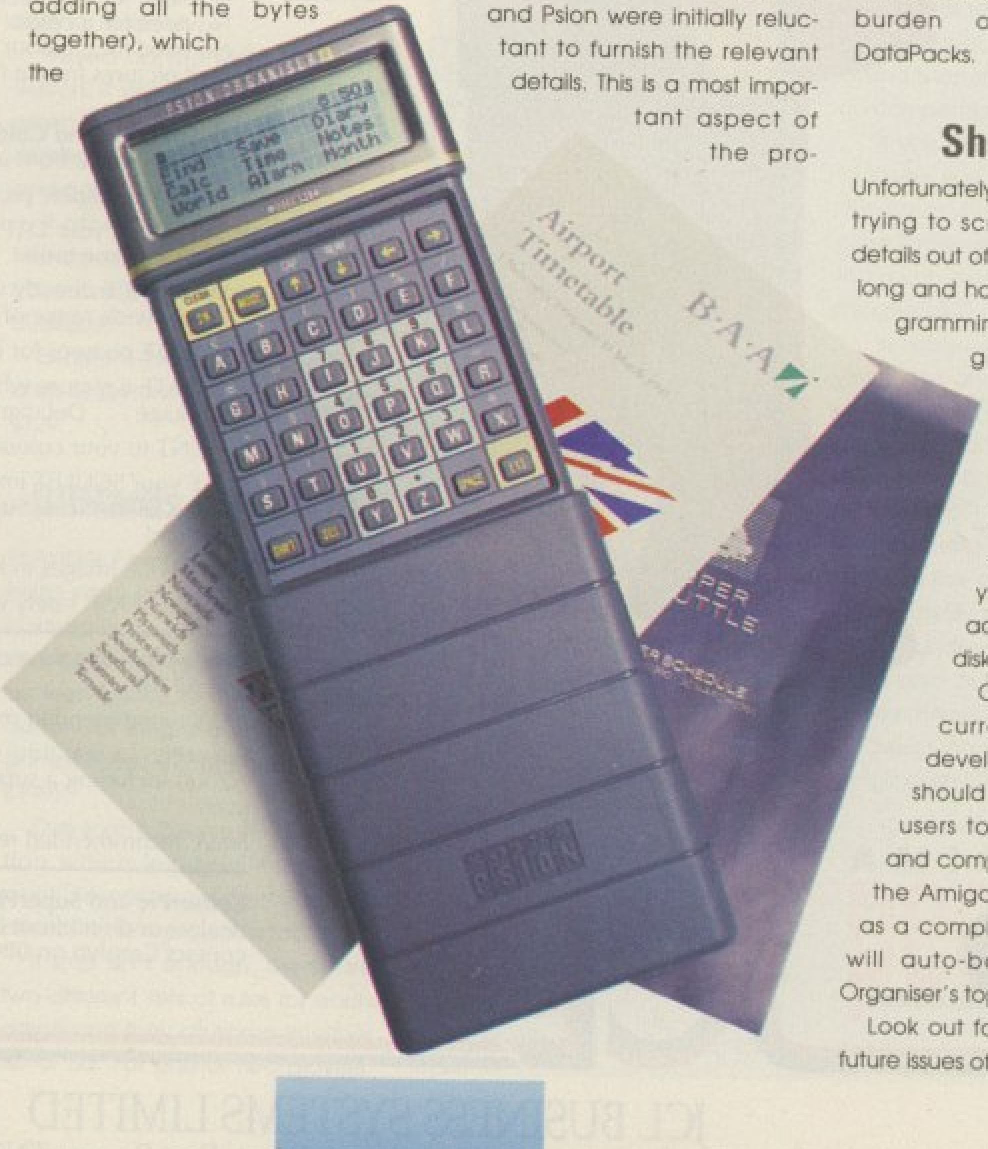
If such a program is to be worth the effort put into coding it, however, it must do more than just allow for file transfer and conversion. For this reason, PsionLink will perform several extra functions.

It will, for instance, directly read and edit files, and automatically convert a Psion Data File into what is known as an ASCII-delimited file on the Amiga. These are perfect for direct importation into SuperBase or any other Amiga database.

The major problem with PsionLink was the inclusion of protocols, most notably Psion's own protocol for which there is no available documentation. I decided to pursue this and to include the same three protocols used in the Comms-Link's own software – none, X-Modem, and Psion. The "none" bit is easy – what comes through the serial port is what you get in your file. X-Modem and PsionLink, however, are a bit trickier.

The X-Modem protocol works by splitting the file to be sent into a series of 128 byte blocks. It numbers these consecutively and transmits them along with a checksum (a special number derived from adding all the bytes together), which the receiving machine uses to check whether the data has arrived intact. If it has been corrupted, the transmitting machine is informed and fresh attempts are made to successfully transmit the data until it arrives in an uncorrupted state.

The Psion protocol was the real toughie. As mentioned, there is no published data on its structure, and Psion were initially reluctant to furnish the relevant details. This is a most important aspect of the program, however, and I persevered until they were kind enough to give me what I needed. After all, with a third party already producing the equivalent ST program, there's no reason why the same facility shouldn't be available on the Amiga.



The Psion protocol allows for several extremely useful extra features. You can, for example, transfer accidentally deleted files from the Organiser's DataPacks to a new host, and can transfer password protected Notepads without first having to de-protect them.

More usefully, it allows the transfer of OPL object code to and from the Amiga, so that Organiser programs can be developed in the much larger and friendlier environment of the Amiga.

For programmers looking to develop software for the Organiser, the advantages offered by not having to ruin one's eyesight and patience squinting at the diminutive Psion screen cannot be underestimated. The chance to use a decent Amiga text editor when coding is also a great boon.

For those not interested in programming, the link allows for the saving of invaluable data to floppy disk for future use, and relieves the burden on over-populated DataPacks.

Shareware

Unfortunately, I spent so much time trying to scrounge the protocol details out of Psion and sweated so long and hard when actually programming PsionLink, the program on your May coverdisk is a demo version only. The full version, including Psion protocol and my own file editor, is available if you get in touch at the address included in the disk readme.comms file.

On a final note, I am currently working on a developer program which should make it possible for users to write, test, debug, and compile OPL programs on the Amiga, then bundle them as a complete Data Pack that will auto-boot itself into the Organiser's top level menu.

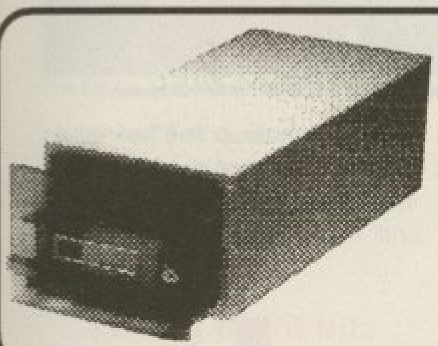
Look out for more about this in future issues of *Amiga Computing*.

MEGA DEALS ☆

AMAZING OFFERS ON 3.5" DSDD DISKS

25 DSDD 135 tpi	10.95
50 DSDD 135 tpi	20.95
75 DSDD 135 tpi	30.95
100 DSDD 135 tpi	**35.95**

ALL DISKS SUPPLIED WITH LABELS AND ARE 100% ERROR FREE 2 FOR 1 GUARANTEE



BANX BOX

HOLDS 90 3.5" DISKS
CAN BE STACKED
HORIZONTALLY AND VERTICALLY

1	8.00
3+	7.50
5+	7.00

XCOPY PROFFESIONAL

(THE ULTIMATE BACKUP UTILITY)

- ☆ FLOPPY DISK BACKUP
- ☆ HARD DISK BACKUP
- ☆ BACKS UP IBM/ST DISKS
- ☆ CHECKS DISKS FOR ERRORS
- ☆ FAST FORMATTING UTILITY
- ☆ INCLUDES HARDWARE FOR EXTERNAL DRIVE BACKUP
- ☆ BACKS UP VIRTUALLY ALL KNOWN DISKS

THIS UTILITY IS RECKONED TO BE THE BEST ON THE MARKET

ONLY 34.95

HOW TO ORDER

BY PHONE
0782 208228
BY FAX
0782 281506
BY POST
MEDIA DIRECT
COMPUTER SUPPLIES LTD
AMC5, UNIT 3
RAILWAY ENT. CENTRE
SHELTON NEW ROAD
STOKE ON TRENT
ST4 7SH
ALL PRICES INCLUDE VAT

2.95 P & P PER ORDER
9.00 NEXT DAY
(UK MAINLAND ONLY)

Access VISA

THIS MONTHS SPECIALS

☆☆ OFFER 1 ☆☆
200 3.5" DSDD +
2 100 CAP BOXES
~~79.95~~ **64.95**

☆☆ OFFER 2 ☆☆
NAKSHA MOUSE+
MAT AND POCKET
~~34.95~~ **22.95**

☆☆ OFFER 3 ☆☆
CUMANA EXT.DRIVE
PLUS 512K RAM EXP.
WITH CLOCK
~~92.90~~ **87.95**

☆☆ OFFER 4 ☆☆
CUMANA EXT.DRIVE
PLUS **XCOPY PRO**
~~94.90~~ **89.95**

☆☆ OFFER 5 ☆☆
ACCESORY PACK
MOUSE MAT
MOUSE POCKET
DISK CLEANING KIT
DUST COVER
~~9.90~~ **7.99**

GENUINE SONY 3.5" DSDD BULK DISKETTES

25	12.45	200	79.95
50	22.95	500	179.95
100	41.95	1000	339.95

(ALL DISKS 100% ERROR FREE AND ARE SUPPLIED WITH LABELS)

RAINBOW DISKS

(RED,GREEN,YELLOW,ORANGE,BLACK,WHITE COLORS AND QTY'S OF YOUR CHOICE)

3.5" DSDD DISKS		5.25" DSDD DISKS	
25 DSDD	13.75	25 DSDD	10.45
50 DSDD	26.45	50 DSDD	18.95
100 DSDD	44.95	100 DSDD	34.95
200 DSDD	84.95	200 DSDD	67.95

(ALL DISKS 100% ERROR FREE AND ARE SUPPLIED WITH ENV./LABELS)

GENERAL ACCESSORIES

QUALITY MOUSE MAT	2.50	ATARI DUST COVER	3.95
MOUSE POCKETS	1.50	AMIGA DUST COVER	3.95
3.5" CLEANING KIT	1.95	2 PIECE PRINTER STAND	5.95
5.25" CLEANING KIT	1.95	MONITOR STAND	12.95

POSSO BOX

HOLDS 150 3.5" OR 70 5.25" DISKS
CAN BE STACKED
HORIZONTALLY AND VERTICALLY
ONLY **15.95**

RIBBONS

WE STOCK A
LARGE RANGE FOR
AMSTRAD
BROTHER
CITIZEN
EPSON
NEC
PANASONIC
STAR
AND MANY MORE

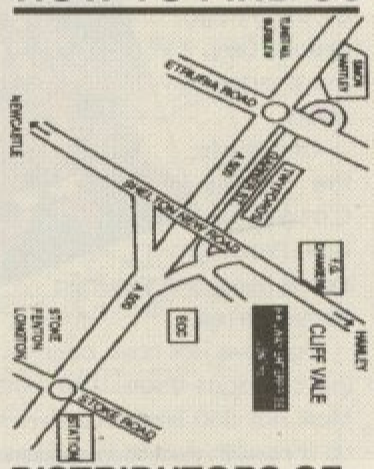
SWITCHES AND CABLES

WE STOCK A LARGE RANGE
OF DATA SWITCHES AND
CABLES
PHONE FOR A QUOTE

REMEMBER !!!

WE ONLY SELL **HIGH QUALITY** DISKETTES,OUR 3.5" DISKETTES ARE MADE BY **K.A.O** AND OUR 5.25" DISKETTES ARE MADE BY **ATHANA.** WE DO NOT SELL SUB STANDARD DISKETTES FROM THE FAR EAST.

HOW TO FIND US



DISTRIBUTORS OF:-

KAO
ATHANA
QuickShot by Bondwell

TRADE GOVERMENT LOCAL AUTHORITY AND EDUCATIONAL ORDERS WELCOME

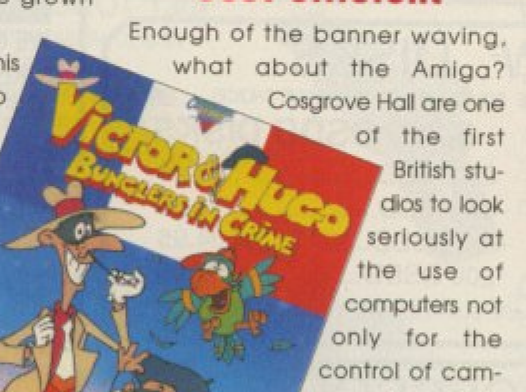
The Don Bluth epic games based on the continuing adventures of Dirk the Dork have offered the most impressive example of animation sold as computer entertainment

Tune in to 'toons

Amiga Computing's big kiddies, Stevie Kennedy and Paul Austin, take a look at animated Agnuses.

Possibly the greatest contribution to Western civilisation to come from across the Atlantic – that's one way of describing the cartoon industry, especially if you're a GBK (Great Big Kid) like most of the *Amiga Computing* staff.

Animation is now beginning to hit the micro market with a vengeance, so it is fortunate for those of us with a love of moving pictures that the Amiga is eminently well qualified as a machine on which to produce home-grown cartoons.



The Amy's abilities in this department seem at last to be on the verge of professional recognition, with a variety of commercial animation studios either exploring the possibilities offered by the Amiga, or already using it in the production chain.

Of these, the name Cosgrove Hall Productions stands head and shoulders above the rest.

Cosgrove Hall have been making cartoons since 1976, when Mark Hall and Brian Cosgrove set up shop with six staff in a converted warehouse. Since then, animations such as *Wind In The Willows* and *The BFG* have helped them win four BAFTA awards and an EMMY, and the company has grown to 130 people, filling out a plush custom studio building just south of Manchester.

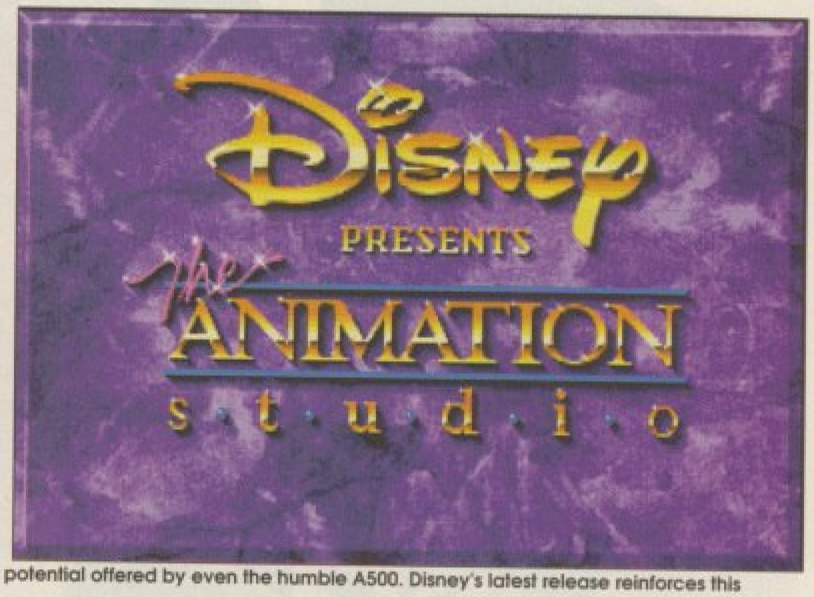
Meanwhile, Cosgrove Hall's bread and butter productions, *Dangermouse* and *Count Duckula* have been delighting children and GBKs for the best part of a decade. Against a background of almost total U.S. domination, Cosgrove Hall and a handful of other studios have produced cartoons of a distinctly British flavour, offering a refreshing riposte to the sort of one-way transatlantic traffic which has seen "Masters Of The Mega-Blasters" clones come to dominate our tellies.

Cost-efficient

Enough of the banner waving, what about the Amiga? Cosgrove Hall are one of the first British studios to look seriously at the use of computers not only for the control of cameras but for the production of graphics and the development of characters as well.

In their search for a cost-efficient system offering quality animation at a decent price they alighted, not surprisingly, on the Amiga, and it was this decision which sent us scurrying up the M6 to see how they were using our favourite machine.

We spoke to Phil Atack, the man with the job of assessing the Amiga's potential, and asked him what he thought. "We're looking into using the Amiga for line testing," he told us, hurriedly pushing *F29 Retaliator* under a pile of papers, "but we're having difficulty with the image resolution." Line testing is the animator's jargon for rough sketch, and is the first step in the process of bringing characters to life. Normally, a line test would involve a series of drawings done manually then filmed one at a time until the animators had a simple



The Space Ace and Dragon's Lair games opened the eyes of many Amiga owners to the potential offered by even the humble A500. Disney's latest release reinforces this

pencil-sketched cartoon on video. This is a time-consuming procedure, and difficult to experiment with.

Lining them up

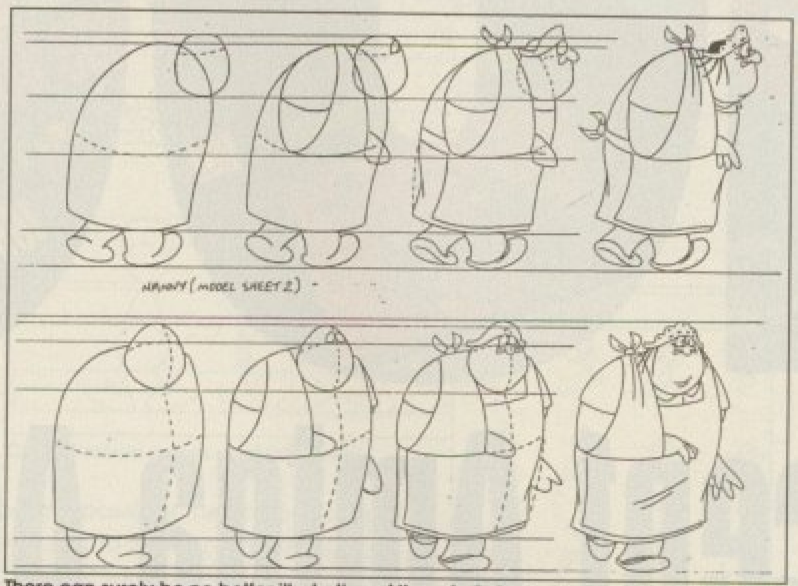
Using an Amiga, however, line testers such as Phil can produce a full line test without recourse to video, changing as many aspects of it as they please before passing it on to the animators for the paint job.

At this stage the Amiga falls short of requirements. "We find that computer graphics can't achieve the resolution we get with ink and acetate", said Phil. This isn't a slight on the Amiga, however, as no other micro fits the bill either.

At the moment, Phil is using an Amiga 2000 with hard drive and 8Mb memory, along with Chroma-Colour software and a digitiser linked to a high quality still frame video camera. The set-up isn't cheap, and would burn a large hole in £10,000, but it is far more attractively priced than anything previously available to the professional. Armed with this array of desirable equipment, Phil was hard at work on Cosgrove Hall's newest cartoon, *Victor and Hugo*, when we arrived.

"It's something I knocked up the other day to test the software a bit," he said. The sequence showed Hugo smoothly animated for a fragment of speech, and amply demonstrated the advantage of the pencil over the mouse. "Using a mouse is a bit of a nightmare," we were told, "especially if you have to do dozens of cells."

Drawing on-screen, however, needn't be carried out with with a cheese-chaser, and Phil admitted to never having tried a graphics tablet for sketching. The addition of a tablet could quite easily dispense altogether with the video camera at the line testing stage, leaving the line tester to sketch straight onto the Amiga.



There can surely be no better illustration of the art of character development ...

Disney does it

We asked Phil for his opinions on the newly released Walt Disney Animation Studio (TAS) and his eyes lit up. The general reaction was that although not up to the job of creating professional cartoons, TAS is a much cheaper tool, ideal for the animator experimenting at home or for training beginners. "We need the four level animation and digitiser options from Chroma-Colour" he affirmed, "but the

Storyboards from an actual Cosgrove Hall Count Duckula cartoon show how advance planning is essential to a good cartoon

Disney package looks great for developing an idea or for the amateur who wants to produce his or her own stuff."

Cor, chief!

We were more than a little reluctant to terminate our day out at Cosgrove Hall, and refused to leave without an armful of souvenirs and a posed photo with Igor and Duckula himself. After all, the Amiga is at heart a fun machine, and to see it put to good use by the company which has brought so much enjoyment through its cartoons was a most welcome treat.

If our Amy is capable of service at the professional level and with such an illustrious crew of animators, then there's surely some hope for those of us at the mere amateur level who'll be diving with glee into The Animation Studio.

Early attempts

Walt Disney isn't the first company to attempt a dedicated low-end Amiga animation package – it's just the latest and most successful. There have been several previous offerings, including Antic Software's Zoetrope package.

This suffered originally from being low-res NTSC only, and utilising its own picture format, but was a hint of what we might expect from the Amiga.

Since we reviewed Zoetrope in the April 1989 issue, there has been a dearth of animation packages with the notable exception of DPaint III.

Programs such as Animagic and Fantavision have tried to raise an eyebrow, but none have been sufficiently feature-packed to become a mainstream rival for the all-conquering DPaint III.

What has been missing from nearly all previous animation programs has been an approach which follows along similar lines to that taken by the professional animator. Zoetrope was stuffed with special effects, such as fades, wipes and shatters, which you could apply to your graphics, but none of these were of any particular use.

Clever though they may be, such effects are really only useful if your animation is designed for a professional presentation rather than a cartoon. Zoetrope was too crude for the former and unsuitable for the latter.

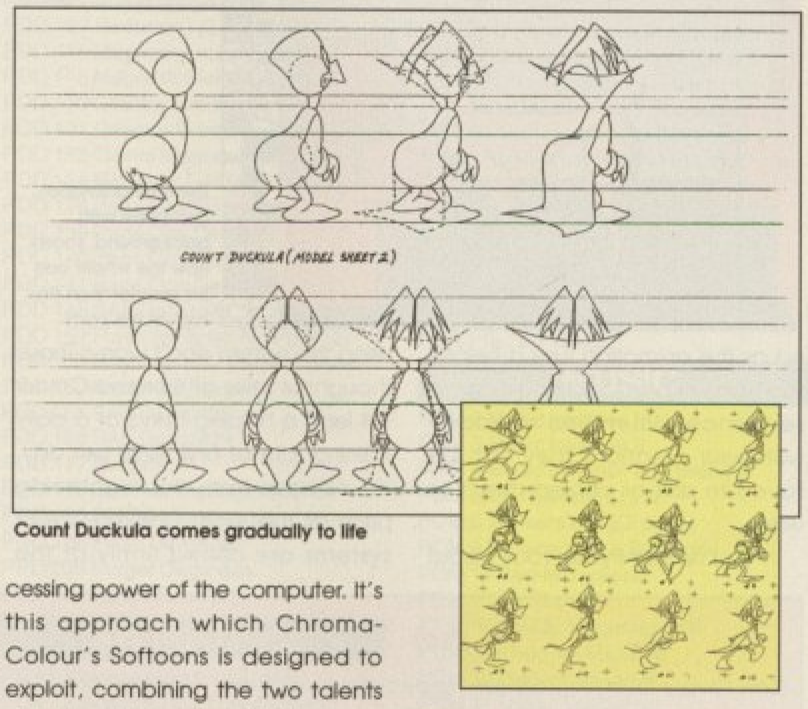
Zoetrope was and remains an excellent program in a technical sense, especially when you remember its age. However, it is also the best example of an early Amiga package which, while being dreamily put together, was dismally deficient in its appreciation of just which market it was supposed to be aimed at.

Paper to pixel

In the world of computer animation there are two distinct routes employed to create the moving pictures we all know and love. Your approach to the subject is usually determined by your background, whether it lies either in the hand draw approach of the illustrator or the digital trickery of the artistic techno-junkie.

The average Amiga enthusiast will no doubt be more at home with the conventional Amiga environment of the paint package, with imagery being provided from the somewhat less than subtle touch of the various processing tools employed, not least of which is the rather clunky Amiga mouse.

The second approach is a more traditional one combining the hard-earned skills of the conventional illustrator along with the processing power of the computer. It's this approach which Chroma-Colour's Softoons is designed to exploit, combining the two talents with the aid of video digitising.



Count Duckula comes gradually to life

The biggest complaint from free hand artists when confronted with computerisation is the prospect of using a mouse. This is a definite non starter with most animators. As a result an alternative method is required and it's here that the digitiser comes into its own, importing hand drawn cels direct from the paper to the line-tester for editing, composition and of course playback.

It's fair to say Softoons is the answer to an animator's needs rather than that of the Amiga enthusiast hoping to dabble in a touch of the Disneys. As a result of the specialised approached and the consequent limit for potential sales the Softoons system is not for the financially faint hearted with a starting price of £630 for the software alone.

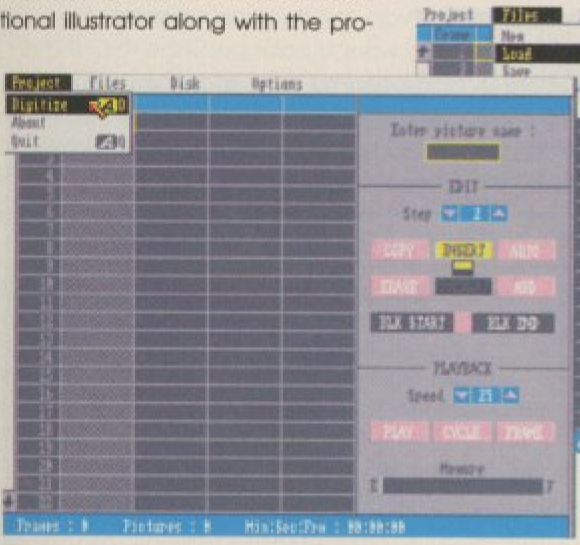
If you were to go the whole hog and invest in the complete system of cameras, rostrum stands and monitors it would add up to just under £3,000. As I said, it's not aimed at the amateur.

The system comes in two distinct formats, either an A500 version which is designed to suit the needs of an animator working from home, or the more advanced and expensive Amiga 2000-based system designed specifically for studio use.

The principle difference between the two systems is the number of available levels of animation. The A500 version only manages one level similar to that of TAS, whereas the studio version is capable of up to four level combinations.

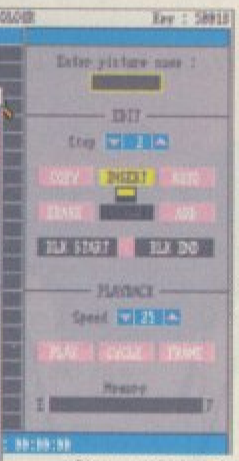
This basically means that all the elements of the animation produced on the A500 system must be drawn and shot onto a single cel, the studio alternative being capable of combining four individual drawings onto the same exposure sheet to form the finished cel. Each element joins with the rest but still retains its individuality for editing purposes.

To be realistic, the price of the



Chroma-Colour's digitize option shows its professional touch

Exposure sheets can be loaded in a form which any pro will feel comfortable with



Chroma-Colour is more flexible in use, if more difficult

studio version complete with all the hardware is strictly for the pros. As a result I'll be concentrating on the slightly more affordable A500 version which might still be within the reach of the affluent enthusiast.

The do's and don'ts

Perhaps a more accurate heading might read *what you can do, and what you can't*. With the Softoons system you can import black and white line tests, compile sequences and adjust, improve, and generally test out your creations prior to spending heaps of cash on the phenomenally expensive process of creating full colour animations.

Softoons in effect is an animation utility rather than a standalone package like TAS.

The idea is to speed up the process for a pro. As a result there's no paint package available, no internal editing and no colours. Softoons talents are devoted purely to digitising and running hand drawn images, and this as you might expect it does well, but certainly not cheaply.

Flip through

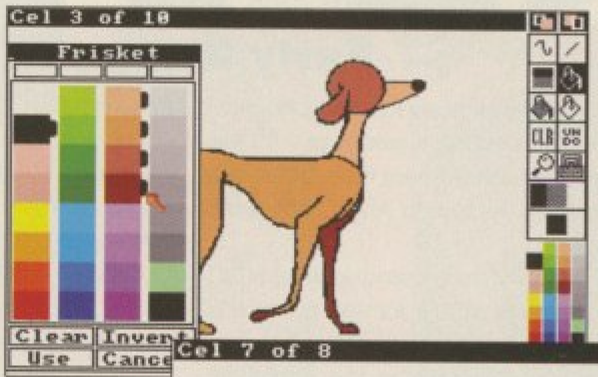
The standard set-up will support up to 200 individual drawings within the machine. Considering the frame rate on certain animations this is not exactly impressive, but with the addition of some extra memory things would become a little more acceptable.

The number of drawings shouldn't be confused with the number of frames used. It's quite common for an animation to use the same drawing on several frames depending on the effects required.

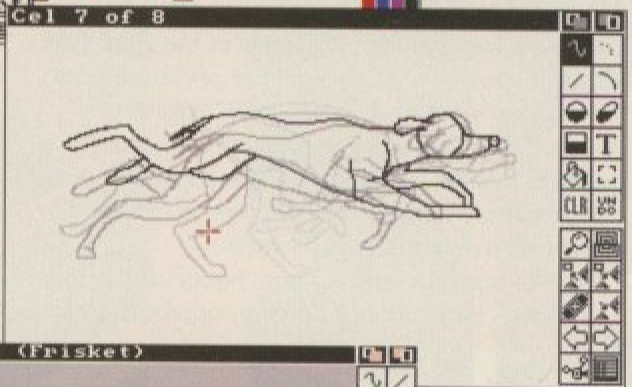
Once you've captured a drawing with the digitiser it can be played instantly or cycled with the other frames in the sequence. This can be done at any rate between 1 and 99 frames per second.

The frame rate can be adjusted as the animation runs a helpful feature when composing a sequence. When you're happy with your creations they can be saved to disk or copied direct to video.

If you're slightly nervous about using the system don't worry. Those thoughtful folks at Chroma-Colour will lend a helping hand at a daily training rate of only £250 per day. It's obvious from the frightening price list that both Chroma-Colour systems are aimed firmly at the commercial market, but if you're a real enthusiast who needs to digitise his handy work it's the only dedicated equipment around.



Definining the Frisket before importing the background is a simple matter of clicking on the colours to be masked off. Here, the dog's body colours along with the black of its outline have been included



The original line animation showing the onion skin effect. In use, the ability to see the last three cels is an invaluable aid to even duff animators like us

The final animation, complete with background, shows how the whole can be greater than the sum of the parts

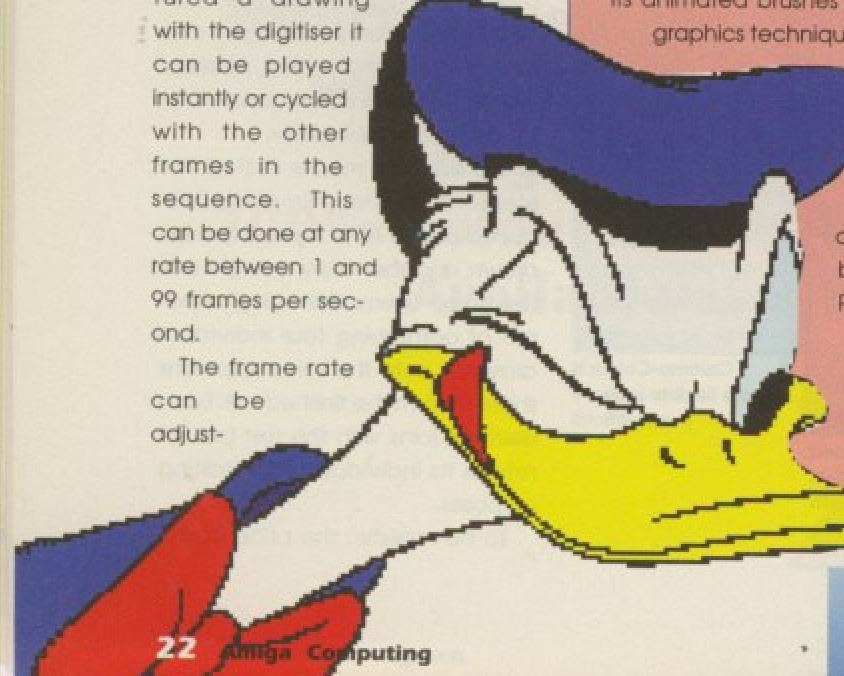
Cheap alternative

If like me your bottom lip will still be trembling at the prospect of spending all your hard earned cash on Softoons, dry your eyes. There is an alternative method to get your freehand skills into the Amiga, and as a result your anims – look out for our review of graphics tablets soon.

Walt Disney Animation Studio

We tried and we tried and we tried, but we found nothing that comes close to The Animation Studio in the home animation market. Chroma-Colour is an expensive alternative for the professional market, but for cartoon-loving Joseph Public harbouring a secret desire to bring Tom & Jerry to life on the Amiga, there's no real choice.

Disney, as you might expect, has written TAS entirely from the viewpoint of an animator. From start to finish, emphasis is placed solely on producing cartoons, such that although not of professional standards, TAS engenders a professional feel which carries beginner



The DPaint contribution

Dan Silva's DPaint program, especially in its third incarnation, has been one of the prime movers in the world of Amiga animation for several years, and there are many who owe it a debt of gratitude.

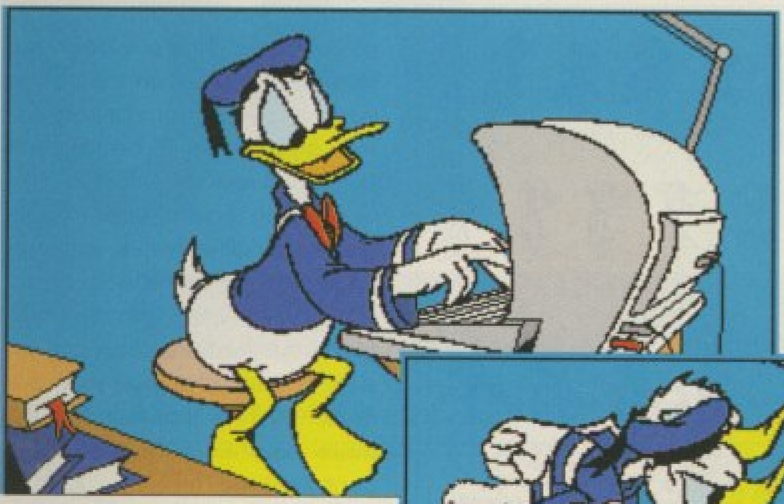
DPaint III established the now accepted ANIM format and spread the gospel of Amiga movies to the wider audience through myriad PD demos and, in a very important way, boosted the success of the Amiga as a whole.

Its animated brushes were a revolution in Amiga graphics techniques which are only now being incorporated into other packages such as Spectracolor. Animations thus created could be saved in IFF or ANIM format and played back using Electronic Arts' Play routine.

Since then, the proliferation of stand alone PD ANIM player programs has allowed amateur animators to pass their programs around freely, and although sound isn't catered for, programs such as Movie will put anims through their paces at a very respectable frame rate.

The major drawback when animating with DPaint is that it was designed primarily as a paint program. Animation is possible, but it is obviously an added extra rather than the program's raison d'etre. For this reason, DPaint loses out badly when compared to The Animation Studio, but that's not surprising.

For those who want a paint package first, and a dabble in animation as a bit of fun on the side, DPaint is still a very attractive buy, and should continue to provide animations for the ever expanding public domain demo libraries.

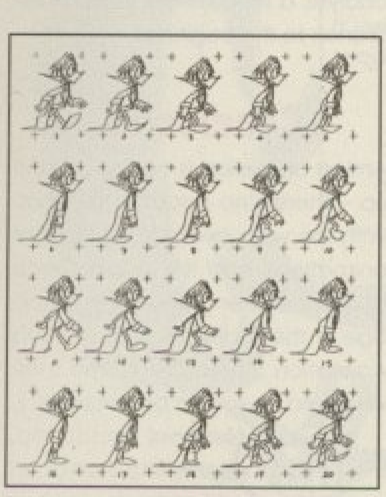


The Demo-Reel is a good example of the overall quality of the Disney product. This excellent Donald Duck animation was put together by Walt Disney artists specially for The Animation Studio and is as good an advertisement as you can get for its potential

along with it rather than leaving them stranded.

The main disk contains two programs, Pencil Test and Ink & Paint. The first of these is the line tester and it is here that any animation begins its life.

The user progresses from rough sketch to finished line-art animation, then loads the whole thing into Ink & Paint for the application of colour. The overwhelming impression during all this is TAS's extreme ease of use.



And I bet you thought walking was easy!

Let's face it – how many of us can draw? Not us. Disney, however, doesn't simply leave the beginner to get on with it.

To take as much of the pain as possible out of cartoon production, there is a library of sample animations on the program disk and a second disk packed to the gunnels with clips from actual Disney animations.

The library animations can be used in the user's own productions and loaded into Ink & Paint for colouring. The Morgue disk containing the Disney clips, however, is protected by copyright and the animations cannot be tampered with.

If you want to create Britain's answer to Mickey Mouse you're going to have to put in a certain amount of work!

The Pencil Test part of the package will be familiar to anyone who has used DPaint, as it sports very similar menus and all the usual drawing gadgets.

Circles, boxes and elipses, filled or unfilled, are all there, as are the more advanced brush and airbrush facilities. This isn't just an ordinary drawing program, however, and it has several features designed to make animating as easy as possible.

Knows his onions

There is a variable zoom option, and a group of cel manipulation devices for copying cels to and from a buffer, cutting them out or inserting them anywhere in the sequence.

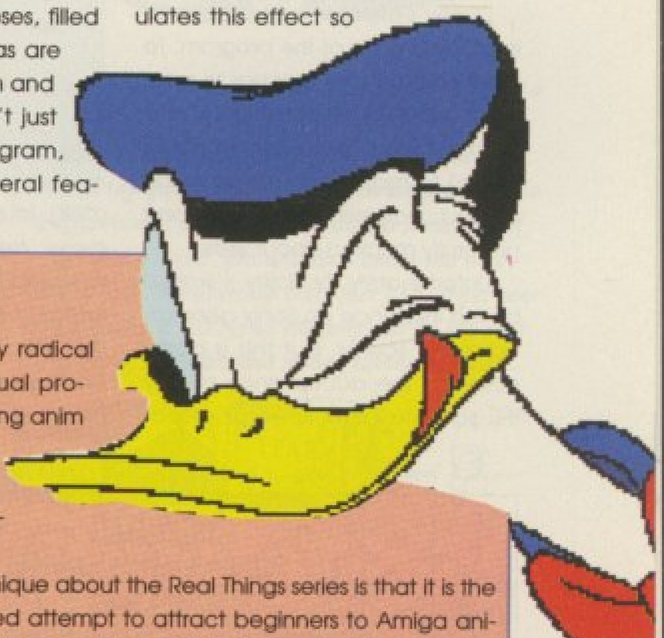
By far the most specific options, however, and those which set Pencil Test apart, are the three at the bottom of the toolbox gadget bar.

The two arrow gadgets are used to flip back and forth through the sequence of cels at the click of a mouse button. They are useful when the user wants to travel through a relatively small number of cels, but they really come into their own when they make it possible to see the 'onion skin' effect at its best.

'Onion skin' is a term and an effect dating from the earliest days of animation when cels were drawn on a series of semi-transparent layers of paper.

By 'looking through' these layers, the animator could discern the dim outlines of the previous three cels or so, and thus achieve a much better appreciation of how the movement was developing.

The Animation Studio simulates this effect so

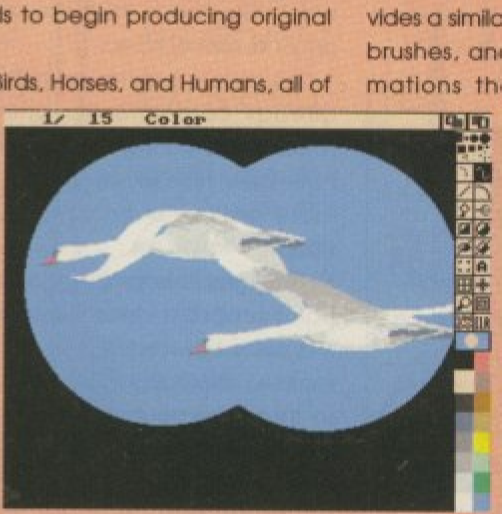


Real Things

Representing one of the few commercial attempts to spread the animation word, RGB Studios' Real Things series is aimed at providing the beginner with the tools he or she needs to begin producing original work.

The series consists of three packages, Birds, Horses, and Humans, all of which contain a diskful of DPaint anims and a manual. The latter sets out to dispense advice on all aspects of anim brushes, including their creation, development, and editing, and goes on to give hints on backgrounds and so forth.

Each disk contains a large number of good quality animation sequences which the beginner can use in animations or as a guide to the techniques of, for example, making a horse run without making it look like a table having a fit.



None of this is particularly radical or new: the DPaint manual provides a similar guide to using anim brushes, and the animations themselves are relatively simple.

What is unique about the Real Things series is that it is the only sustained attempt to attract beginners to Amiga animation we've seen since DPaint's remarkable potential was first realised.

If you're desperate to the point of financial profligacy, Real Things at £20 a throw is one way to build up an instant animation library. If, on the other hand, you don't list setting fire to tenners among your hobbies, try the public domain when looking for animated inspiration. Real Things is good ... but not that good.

that the beginner can flip forward without losing sight of the preceding three cels, all of which are visible as progressively fainter grey outlines. The effect is simple but invaluable, and alone is facility enough to place The Animation Studio high on my shopping list.

The bottom left hand gadget is a simple player which flips through the existing sequence cel by cel in a loop to make testing the animation as easy as possible.

It simply doubles up for an option available via a pull-down menu, but its inclusion on the toolbox bar is an indication of the thought which has been put into this package's design.

Decent exposure

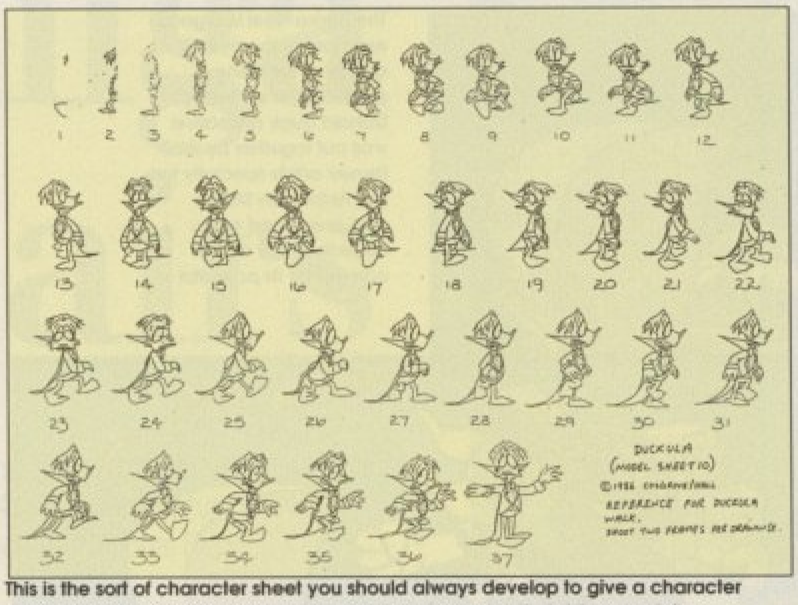
The last gadget, on the bottom right hand corner, takes the user to what the pros call the 'exposure sheet'.

This section of the program simulates the real life exposure sheet you will find at the heart of all cartoon productions.

It is used to keep track of timings, frame rates and events such as music, speech, and special effects. The exposure sheet is not an optional extra – if you're serious about putting decent cartoons together you *must* use this technique.

Disney's exposure sheet is one of the trickier parts of the program. To use it properly, the user has to master a dozen or so commands and their syntax. These allow .SMUS (Sonix) format music scores to be played, paused, faded out, and generally mucked about with.

Unfortunately, flexibility is limited by the insistence on Sonix generated music scores, but this is partly offset by the acceptance of any IFF sample as a special effect



This is the sort of character sheet you should always develop to give a character some life before he is committed to celluliod. Cosgrove Hall strikes again!

Product Information

Walt Disney's Animation Studio is a product of the Walt Disney Company

Available:	Now
Supplier:	Entertainment International (0268) 541126
Price:	£99.95

Softoons Personal Line-Tester and Chroma-Colour Animation Line-Tester are products of the Chroma-Colour company.

Available:	Now
Supplier:	Chroma-Colour Animation Supplies & Equipment Ltd (081) 675 8422
Price:	From £630 for software alone to £4,000 for software, A2000, camera, lights, and rostrum equipment.

(!SFX). Musical scores and samples, once decided upon, can be tweaked in a number of ways. The syntax of the !SFX command allows the user to choose sample playback speeds, which channel it will play through, whether or not it will be in stereo, and the number of times it will loop.

The !SCORE command can be used to fade a tune out and set its tempo, and peripheral commands such as !TEMPO, !VOLUME, and !NOTE offer occasional control of any sounds or scores presently being played. Altogether, the exposure sheet is an indespensable part of the animation process, and The Animation Studio would have been incomplete without it.

Ink blots

Once the pencil animation is complete and the user is satisfied that the exposure sheet is arranged correctly, the data is stored on disk for later importation to the second part of the main program, Ink & Paint, for the final touches.

This is the weakest chink in Disney's armour, because it's not really a paint program at all. There are up to 32 colours available, more with dithering, but the only painting facilities available are a couple of fill and line-drawing options for touching up any 'leaks' which threaten to let a colour spill out of its allotted area.

The idea is that the animation is already complete and merely requires colouring, but it would have been nice to have had a few more options even at this late stage.

That grumble aside, the Ink & Paint program does everything required of it with little fuss. Its best feature is the ability to use a 'frisket' so that backgrounds can be slotted in behind the animation without overwriting any of your hard sweat and tears.

Friskets work by specifying which colours cannot be overwritten, so all you need do is pull down the frisket option, click on the colours you've used in your animation, then import your IFF background behind the relevant cels.

You can load different backgrounds for different cels, so there's no reason for bland backdrops. The major problem with the backgrounds is that they can only be static – there's no multi-level animation such as that found on the more expensive Chroma-Colour configurations.

This reinforces the apparent Disney ethos that demands all animation details be finalised before Ink & Paint is used, but there's no great difficulty in this.

If the user plans ahead using a storyboard and organises the animation before starting, the finished product will be better thought out and more efficiently reached. Disney's emphasis on their own methods and the insistence on a structured approach are in the last analysis a help rather than a hindrance to the beginner.

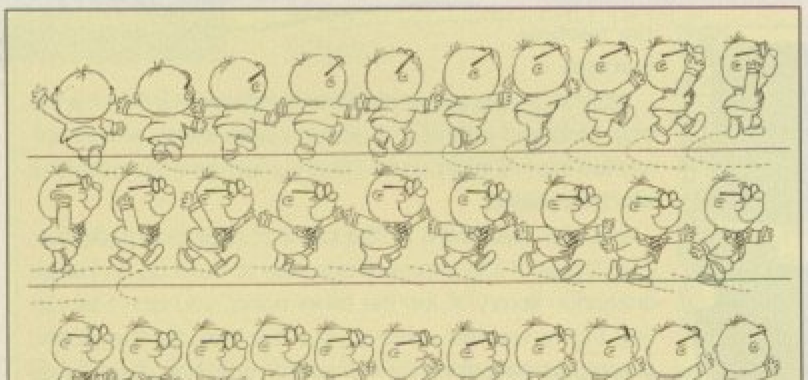
Conclusion

Amiga animation is on the up and up – there's no doubt about that. With the wide availability of DPaint animations, and the appearance of a new low-end dedicated package in the shape of Walt Disney's Animation Studio, the home market could be said to be buoyant.

In the professional sector, too, the Amiga is establishing itself as an excellent machine for line-testers and animators alike.

The Chroma-Colour software, though expensive, has proved its ability to meet the demands of an expanding user base, and should continue to bring the Amiga much deserved credit in this new sector.

With success apparent in both areas, the Amiga can only continue to improve its standing as the only home micro which is both great fun and a truly serious buy.



Penfold comes to life on paper in this early artist's character sheet

We would like to take this opportunity to thank Phil Atack, Willard T Kitchen, Chris Philips, Carmel Wilson, and all at Cosgrove Hall for their help.

pd news

THE MAGAZINE FOR AMIGA PD ENTHUSIASTS

G.T.S. THEME PACKS

NEW PACKS AVAILABLE EVERY MONTH

The best selling special PD/Shareware packs compiled by G.T.S. will in future be released as a 'Theme Pack of the Month'. Each will cover a specialized subject and be distributed worldwide by GTS in Europe, Megadisc in Australia and Jumpdisk in the USA. The programs included will be the latest available and if you purchase from GTS, you will have the opportunity to update to the latest version at just £1.50 per 2 disk set.

JANUARY

PRINTER WORKSHOP

It took GTS many months of research to discover the programs most likely to help Amiga/Printer users. The very best have been included here. Print disk labels with Diskprint, Post is a Postscript Interpreter, there's a selection of rare drivers, plus Print Studio, Print Image, PrintSpool and many more.

2 Disk Set for £5.99 (Members £5.49)

APRIL

DISK UTILITIES I

Do you have problems validating or formatting disk? Need an efficient back up program? Want to speed up disk loading? This packed set includes over 20 useful programs that will solve these and many more disk related problems.

2 Disk Set for £5.99 (Members £5.49)

FEBRUARY

HOME MANAGEMENT VOL.II

In Vol.I, we included the Word Processor 'Text Plus' with a Spell Checker. In Vol.II, there is a Typing Tutor and Grammar Checker PLUS 'Web' a superb spreadsheet and 'DataEasy', an easy to use database. 'CheckBook' will keep track of your finances and 'Mileage Master' will tell you just how much your car costs to run. There is also World Time, MortCalc, LCDCalc and many more valuable small business programs.

2 Disk Set for £5.99 (Members £5.49)

ARE YOU READING 'PD NEWS'?

Just send 50p for a trial copy and keep in touch with top quality PD and Software programs from all over the world. Better still subscribe for one year for just £4.99 and receive a software gift valued at £4.99.

****GTS CLUB ** GTS CLUB ****

Since 1986, George Thompson Services have provided top quality PD and Shareware programs to Amiga owners all over the world. As a member of the 'GTS CLUB' you will read about our new releases first. Membership costs just £15.00 per year and includes a PD News subscription PLUS over £30.00 of software and money saving vouchers.

MARCH

FAMOUS BOARD & PUZZLE GAMES VOL.II

As reviewed in PD News - Fifteen games that include Backgammon, Chinese Checkers, Superb Draughts Game plus Dominoes, Blackjack Lab, the latest version of 3D Tic Tac Toe, Step 3, Puzz, Raps and Bounce.

2 Disk Set for £5.99 (Members £5.49)

PUBLISHED BY GEORGE THOMPSON SERVICES

UNIT 1, DIPPEN, BRODICK, ARRAN, KA27 8RN SCOTLAND TEL: 077 082 234 (24 H SERVICE) FAX: 077 082 212

THE WORLD'S MOST POWERFUL FREEZER-UTILITY CARTRIDGE

IS NOW EVEN BETTER

THE NEW MK II VERSION IS HERE!!

AMIGA ACTION REPLAY II

STILL ONLY **£59.99** POST FREE FOR THE A500/1000

A2000 VERSION AVAILABLE **£69.99**

PLEASE STATE WHICH COMPUTER YOU HAVE WHEN ORDERING

AMIGA ACTION REPLAY SIMPLY PLUGS INTO THE EXPANSION PORT OF YOUR AMIGA AND GIVES YOU THE POWER TO FREEZE MOST ANY PROGRAM, THEN YOU CAN...

JUST LOOK AT THE UNMATCHED RANGE OF FEATURES

- **SAVE THE ENTIRE PROGRAM IN MEMORY TO DISK**
Special compacting techniques enable up to 3 programs to fit on one disk. Now saves directly to disk as Amiga Dos - reloads independently of the cartridge - even transfer to hard drive! Works with up to 2 Megs of Ram - even 1 Meg Chip Mem (Fatter Agnus).
- **UNIQUE INFINITE LIFE/TRAINER MODE - NOW MORE POWERFUL**
Allows you to generate more and even infinite lives, fuel, ammo, etc. Perfect as a trainer mode to get you past that "impossible" level. Very easy to use.
- **IMPROVED SPRITE EDITOR**
The full Sprite Editor allows you to view/modify the whole sprite set including any "attached" sprites. RANGE OF IMPROVED FEATURES.
- **VIRUS DETECTION**
Comprehensive virus detection and removal features to protect your software investment. Works with all presently known viruses.
- **SAVE PICTURES AND MUSIC TO DISK**
Pictures and sound samples can be saved to disk. Files are saved directly IFF format suitable for use with all the major graphic and music packages. Samples are displayed as screen waveform.
- **SLOW MOTION MODE**
Now you can slow down the action to your own pace. Easily adjustable from full speed to 20% speed. Ideal to help you through the tricky parts!
- **RESTART THE PROGRAM**
Simply press a key and the program will continue where you left off.
- **FULL STATUS REPORTING**
At the press of a key now you can view the Machine Status, including Fast Ram, Chip Ram, RamDisk, Drive Status, etc.
- **POWERFUL PICTURE EDITOR**
Now you can manipulate and search for screens throughout memory. Over 50 commands to edit the picture plus unique on screen status "overlay" shows all the information you could ever need to work on screens. No other product comes close to offering such dynamic screen handling of frozen programs!!
- **MUSIC SOUND TRACKER**
With Sound Tracker you can find the complete music in programs, demos,etc. and save them to disk. Saves in format suitable for most track player programs. Works with loads of programs!!
- **AUTOFIRE MANAGER**
From the Action Replay II preference screen you can now set up autofire from 0 to 100%. Just imagine continuous fire power? Joystick 1 and 2 are set separately for that extra advantage!
- **DISKCODER**
With the new "Diskcoder" option you can now 'tag' your disks with a unique code that will prevent the disk from being loaded by anyone else. 'Tagged' disks will only reload when you enter the code. Very useful for security.
- **PREFERENCES**
Action Replay II now has screen colour preferences with menu setup. Customise your screens to suit your taste. Very simple to use.
- **DISK MONITOR**
Invaluable disk monitor - displays disk information in easy to understand format. Full modify/save options.
- **DOS COMMANDS**
Now you have a selection of DOS commands available at all times - DIR, FORMAT, COPY, DEVICE, etc.
- **DISK COPY**
Disk Copy at the press of a button - faster than Dos Copy. No need to load Workbench - available at all times.
- **BOOT SELECTOR**
Either DF0 or DF1 can be selected as the boot drive when working with Amiga Dos disks. Very useful to be able to boot from your external drive.

PLUS A MACHINE CODE FREEZER MONITOR WITH EVEN MORE POWER!!

EVEN MORE FEATURES INCLUDING 80 COLUMN DISPLAY AND 2 WAY SCROLLING:-

• Full M68000 Assembler/Disassembler • Full screen editor • Load/Save block • Write String to memory • Jump to specific address • Show Ram as text • Show frozen picture • Play resident sample • Show and edit all CPU registers and flag • Calculator • Help command • Full search feature • Unique Custon Chip Editor allows you to see and modify all chip registers - even write only registers • Notepad • Disk handling - show actual track, Disk Sync. pattern etc. • Dynamic Breakpoint handling • Show memory as HEX, ASCII, Assembler, Decimal • Copper Assemble/Disassemble - now with suffix names

REMEMBER AT ALL TIMES YOU ARE INTERROGATING THE PROGRAM IN IT'S "FROZEN" STATE WITH ALL MEMORY AND REGISTERS INTACT - INVALUABLE FOR THE DE-BUGGER OR JUST THE INQUISITIVE!

HOW TO GET YOUR ORDER FAST...

TELEPHONE (24 Hrs) - 0782 744707 - CREDIT CARD ORDERS

WE WILL DESPATCH YOUR ORDER QUICKLY & EFFICIENTLY TO ENABLE YOU TO START RECEIVING THE BENEFITS OF YOUR PURCHASE WITHIN DAYS, NOT WEEKS.

ORDERS NORMALLY DESPATCHED WITHIN 48 Hrs. ALL PRICES INCLUDE V.A.T. ALL CHEQUES/POSTAL ORDERS MADE PAYABLE TO...

Access VISA

DATEL ELECTRONICS LTD.,
GOVAN ROAD, FENTON INDUSTRIAL ESTATE, FENTON, STOKE-ON-TRENT, ST4 2RS, ENGLAND
TECHNICAL/CUSTOMER SERVICE 0782 744324

AAR 2

Going online is getting cheaper. Eddie McKendrick gets up to speed with a range of modems for all pockets

Modem operandi

Years ago a couple of hundred well worn notes would not have allowed you to gather much speed in the communications race. For that sort of money most comms freaks would have been delighted to pick up an acoustic coupler type modem with very low speeds and even lower reliability.

These days though your money goes a lot further both in terms of modem speed and features.

Which modem you need depends very much on what you want to achieve. The occasional call to a local BBS service won't warrant a super speedy modem.

On the other hand the cost saving offered by high data transfer rates will be welcome if you are a frequent caller to the US.

EuroLink

The EuroLink modem is a perfect illustration of how comms hardware has become more affordable of late. Your hard earned £264 delivers a unit which allows communication at a respectable 2400 baud.

Like each of the modems featured in this overview it is entirely software controlled. This means that rather than pressing buttons on the front panel to configure the unit, all tweaking is done over the keyboard via a software command set.

The EuroLink is fully Hayes compatible. This is a real boon for anyone wanting to dabble in comms without learning the detailed ins and outs of modem control before going online.

Popular public domain packages for the Amiga including NComm, JRComm and Supertext come pre-configured for use with Hayes compatible decks.

Plug in and go is the order of the day. The modem also includes some useful help screens for those not content to go with a standard package.

In an effort to provide an all round package, EuroLink have bundled a free subscription to CompuServe into the price. This is a truly massive information system of American origin. On it you will find messages, news and over 30,000 public domain programs.

Having said all that, CompuServe is not the most user friendly of places and although your membership is free, the usage charges soon mount up. CompuServe is far too extensive to do justice to in this article and we will be covering the service in its own right at a later date.

As well as getting cheaper, modems have got smaller and simpler to use over the years. At first glance the EuroLink is nothing more than a slimline plastic brick with six lights on the front and no switches to play with. At second glance it is much the same. Gone are the days of twiddling dials, setting DIP switches and pressing buttons to get online.

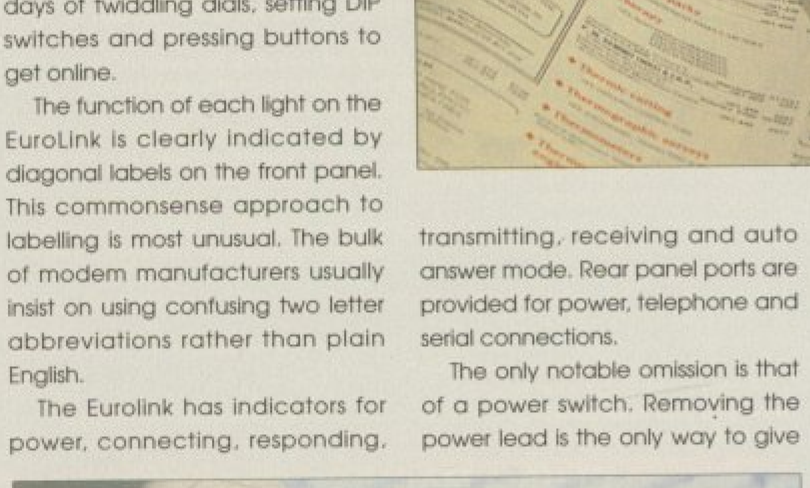
The function of each light on the EuroLink is clearly indicated by diagonal labels on the front panel. This commonsense approach to labelling is most unusual. The bulk of modem manufacturers usually insist on using confusing two letter abbreviations rather than plain English.

The Eurolink has indicators for power, connecting, responding, transmitting, receiving and auto answer mode. Rear panel ports are provided for power, telephone and serial connections.

The only notable omission is that of a power switch. Removing the power lead is the only way to give

EuroLink Modem

Price:	£263.35
Manufacturer:	EuroLink
Telephone:	0625 878888
For:	Very good value Hayes Compatible
Against:	No power switch
Verdict:	The Eurolink is an ideal modem for anyone wanting to dabble with comms without having to re-mortgage their Amiga.



your EuroLink a good night's sleep after many hard hours of conversing over the wires.

Hi-Tec EC2400

If the EuroLink modem can be considered ideal for the beginner, the Hi-Tec EC2400 deluxe is well suited to people wanting to upgrade from aged manual modems.

Like the EuroLink, it is a 2400 baud Hayes compatible unit. The Hi-Tec normally weighs in at £399 but it is currently on offer to *Amiga Computing* readers at £299.

What you get for your extra outlay is a slightly more robust case, more lights and the MNP error correction and data compression systems.

Let's tackle each of these areas in turn. The chassis is a very robust plastic design which is only let down by a flimsy front panel and two inexcusably tacky go-faster stripes down the side. The unit sports a positively psychedelic collection of 11 lights giving information on everything from the current connection status to active speed.

Cosmetics aside, the most important additional feature of the EC 2400 is the provision of the two MNP systems. MNP is a three letter acronym for Microcom Networking Protocol. The Hi-Tec comes with two different types of MNP.

MNP Level 4 is an error correction protocol designed to ensure safe transport of data even if phonelines are bad. MNP Level 5 on the other hand is a data compression protocol. This is used to speed up data transmission from point to point.

With MNP 5 it is possible to achieve a data transfer rate increase of almost 100 per cent, meaning that the EC 2400 has a maximum throughput of 4800 baud. MNP is only of any relevance to you if the services you call support it. Prestel for example does not although most other commercial services do.

One major plus, where the EC wins hands down over the other modems on test, is the provision of a power switch on the front panel.

It is reassuring to have a means of hard reset within easy reach, ideal for situations where the modem is semi enclosed and the back panel is tricky to get to. The Hi-Tec doesn't crash, but sometimes a power-off is the easiest way to reset a line after a failed connection.

The EC 2400 does not look as mass-produced as the other decks reviewed within these pages. The user guide in particular, although extremely informative, lacks the level of presentation offered by the other three contenders. Don't get me wrong, the EC 2400 is a positive Volkswagen build-quality wise. Hi-Tec's design boys just need to apply a little more in the way of cosmetic surgery before it will look as sexy as the others in its class.

Hi-Tec EC2400 Deluxe

Price:	£399 (£299 on special offer)
Manufacturer:	Hi-Tec Modems Ltd
Telephone:	0733 897333
For:	MNP protocols Front mounted power switch
Against:	Unattractive styling
Verdict:	The Hi-Tec EC 2400 deluxe should be a serious contender for your attention if you are looking to upgrade from an existing slower modem. The provision of MNP is a real bonus, but only if the services you want to use support it.

Hayes 9600 +Quad

Just as Hoover have made a name for themselves in vacuum cleaners, Hayes have been at the leading edge with modems since the emergence of the technology.

With that sort of introduction you would be justified in thinking that the Hayes Smartmodem 9600+ Quad might be something special. Depending on what you want to do with comms, you could be right.

As the name suggests the Hayes is a 9600 baud modem. Well it is, as long as you are talking to another compatible 9600 baud modem. Otherwise the +Quad tagged on to the end of the name is of more significance to you.

Quad relates to the ability to transmit and receive data using four universally recognised CCIT modulation standards. You will be less than surprised to know that the highest speed available with these is 2400 baud (V 22 bis). The others are 300 (V 21), 1200 (V 22) and 1275 (V 23) respectively.

Hayes are a key player in the corporate comms sector. In practice, finding another 9600 baud modem at the end of a residentially run bulletin board could prove to be a little on the tricky side.

This means that to all intent and purpose you have to assume that the bulk of your calls will achieve 2400 baud connections. With the provision of MNP the data throughput is increased to a respectable 4800 baud.

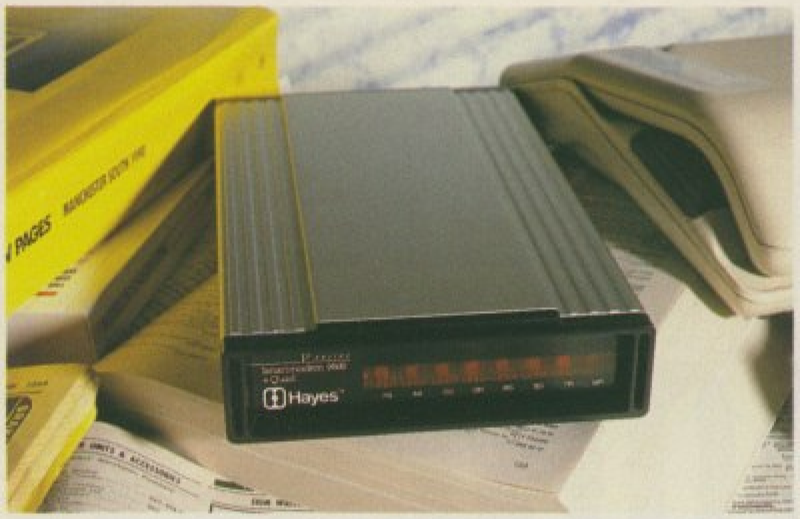
The story doesn't stop there. By use of special protocols it is possible to achieve a nippy data transfer rate of 19,200 baud. This relies on another Hayes modem being at the other end of the link.

All of these additional features invariably mean increased complexity in configuration. The Hayes goes some way to resolving potential setup heartache by incorporating intelligent feature negotiation software.

Theoretically the Smartmodem will automatically establish the highest speed of connection possible. The practice is not entirely silky smooth, but configuration is significantly easier than it would be without the artificial intelligence.

The most striking attribute of the Hayes is its construction. In complete contrast to the other plastic units, it lives in a smart robust metal box. The usual compliment of status lights is provided, as is a power switch on the back panel. There is no question that if build quality is important to you, this is your ideal modem.

In line with its distinctly corporate price tag of £1,149, the Hayes 9600 provides a wide range of facilities geared to the more serious comms buff. The most notable of these is



X25 PAD. The letters PAD stand for Packet Assembler/ Disassembler.

Using PAD it is possible to have virtual rather than physical connections. This means that with a single modem you can be linked to more than one online service.

In simple terms a PAD link works by taking the information from each virtual connection established (the packets) and assembling them into a single data stream for transmission. This stream is disassembled at each end of the link.

PAD has very specific applications and most residential users have difficulty finding a justification for connecting to one online service never mind several simultaneously.

Hayes modems are not cheap. I don't think it is 100 per cent fair to say that all you are paying for is the name, nor is it fair to say you get what you pay for in terms of features genuinely useful to the home user.

The V-Series Smartmodem 9600 +Quad has a very specific appeal to corporate communicators. There isn't a great deal to sell it to home hackers though.

The other large market for high end modems is bulletin board sysops. Hayes are now promoting their entire range to this influential bunch by offering a more than generous 50 per cent discount.

To qualify for this saving, the bulletin board concerned must carry a promotional message for Hayes modems. The sysop scheme should go some way to getting more units online. Any sysops interested should contact the company at the number below.

Miracom Courier

We wrap up our look at modems with the Miracom Courier HST DS. This deck combines most of the features found in the Hayes with one very important additional feature, HST – an acronym for High Speed Technology. Using the Miracom it is possible to achieve a data transfer rate of 14.4k. There are quite a few HSTs doing sterling service at the front end of numerous bulletin boards up and down the country.

HST is a proprietary protocol designed by Miracom's American parent company US Robotics. Each of the other modems we have looked at use the elderly CCITT V standards for data transfer.

Talking of the V standards brings me to the other acronym in the Miracom's wordy title. DS indicates that the Courier is a dual standard modem.

This represents a best of both worlds scenario where the HST protocol is supported side by side with the widely accepted slower V standards.

If first impressions last, I have been sold on the Courier. Despite the unit's immense sophistication, getting online was just a simple matter of plugging in a couple of cables and clicking on my JRComm icon.

Miracom must be commended for the user friendliness of the entire Courier package. The manual is clear, concise and easy to follow. The built-in help screens and command summaries are convenient to access. The level of user support even extends as far as printing a complete command summary on the base of the A4 sized unit. There is no excuse for not having the information you need close to hand if you are the proud owner of a Courier.

On the face of it the Miracom does everything that the Hayes does and more for around the same price. The only feature the Hayes can boast over the Miracom is PAD. This won't be a great loss for most users.

This is an ideal modem for bulletin board sysops. The automatic support of both widely used communications standards (V and HST) means that the Courier is happy to answer the phone and talk to a wider range of modems than any other in its class.

Miracom offer a Sysop price scheme similar to the Hayes one, making these excellent modems available at virtually give-away prices to established bulletin boards.

The only niggling curiosity is that Miracom have not seen fit to provide a telephone socket on the back of the Courier. This means that if you wish to share a line for voice and data the purchase of a socket doubler is a pre-requisite.

Miracom Courier HST

Price:	£1,144.25
Manufacturer:	Miracom Technology Ltd
Telephone:	0473 233888
For:	HST protocol Dual Standard User friendly
Against:	No telephone through-port
Verdict:	If you intend to take comms seriously and money is no object, this is the modem for you. BBS Sysops should leap at the chance to pick up one of these units at 50% discount. It will be a very long time before a better price/performance package comes along

Hayes 9600 +Quad

Price:	£1,148.85
Manufacturer:	Hayes Microcomputer Products, Inc.
Telephone:	081 848 1858
For:	9600 baud PAD Excellent build quality
Against:	Expensive Requires some configuration
Verdict:	The Hayes 9600 +Quad is an excellent modem for serious comms users. I would be inclined to say that it was overkill for domestic users and the Miracom HST DS modem reviewed next is a more realistic proposition for Sysops. If PAD and reliability are important to you then Hayes is the natural choice.

y side with
ver V stan-

st, I have
er. Despite
histication,
a simple
couple of
on my

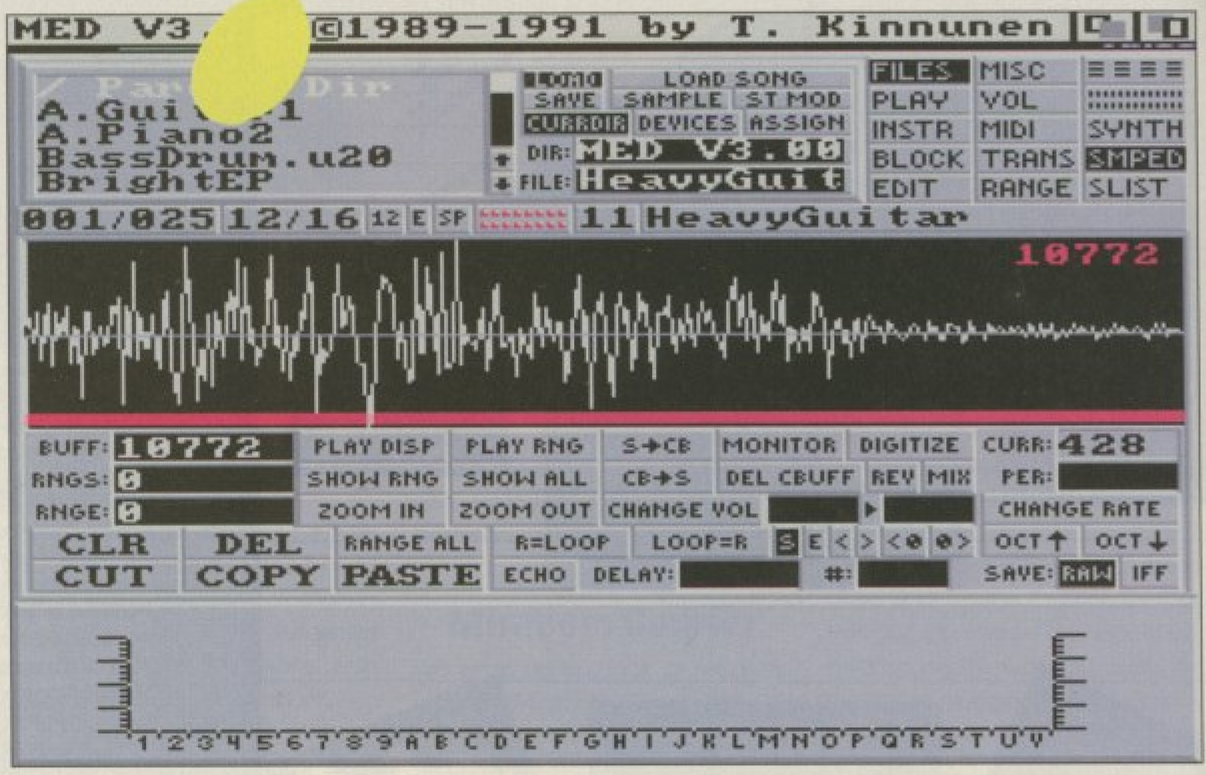
mmended
the entire
manual is
to follow.
and com-
onvenient
ser support
printing a
mmary on
unit. There
aving the
d close to
d owner of

e Miracom
the Hayes
round the
eature the
e Miracom
reat loss for

odem for
e automat-
idely used
ards (V and
Courier is
phone and
of modems
s.
ysop price
Hayes one,
nt modems
give-away
letin boards.
riosity is that
n fit to pro-
cket on the
This means
re a line for
urchase of a
requisite.

The amazing MED v3.00

Stunning improvements push Teijo Kinnunen's mega-popular MED to the musical high ground. Sample this...



If a deluge of disks is anything to go by, MED v2.13 must have been one of the most popular coverdisk programs of all time.

Musical creations from readers of all ages have been flooding through our letter box since last December's cover disk hit the newstands, and at such a rate that we've been hard pressed to give them all a hearing.

With such a reaction to MED, we didn't really have much choice when the latest version appeared - we had to bring it to you as quickly as possible.

Indeed this is the first magazine coverdisk to include MED 3.00, and it's all thanks to author Teijo Kinnunen and Ray from the Amiganuts United PD library.

If you're unfamiliar with MED in its previous versions, you might be confused at first by its rather daunting front end. The disk, however, contains full documentation covering the program's main features in detail, and a bit of perseverance should help you through the rough patches.

Version 3 brings three major new features to the program:

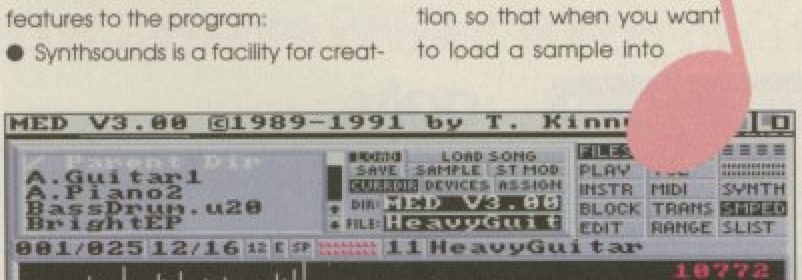
- Synthsounds is a facility for creating and editing your own waveforms for instrument voices or special effects.
- SampleED allows you to edit an already existing sample.
- SampleList is a new way for MED to organise samples.

Sample List

This feature is a boon for people with huge sample libraries. The Sample List is a text file in which you set out the drives and directories in which samples are to be found and lists the samples in each of these directories.

When loading MED 3.00 examines the file MED_paths for this information so that when you want to load a sample into MED all you have to do is click on the SMPLIST gadget to go to a screen with the directories and samples immediately available for selection.

There's no more messing about in MED's tiny file window for one sample in a list of hundreds!



The all-new Sample Editor offers MED v3.00 users more musical muscle than ever

THE

Synthsound

This feature allows you to design and create waveforms for use within your own tunes, then save them to disk. The waveforms can use the whole five octave range and can be made up of 64 individual sections, each with its own type of wave.

To access this function go into the INSTR panel and click on the SYNTH gadget.

You should now be faced with a screen mostly taken up by two panels on which the synthsounds are created.

Between the two are controls for adding and mixing waveforms together, and below you will see controls to select wavetype and drawing methods, along with more editing controls.

The pre-set wavetypes are handy for standard sounds and as a starting point for the editing process. Users can choose from sine, saw, and triangle wavetypes, then go into the panels and edit them by hand using the freehand or line drawing tools.

Cut, paste, copy, and other editing features are also available, along with the more advanced TRANSFORM, which will smooth one wavetype into another.

With practice, Sythsounds should allow you to add your own sounds to a song. The main advantage of sythsounds, however, is that the sounds themselves

How to use The Disk

First of all, you must make a back-up copy of the coverdisk. To do this, boot-up with your copy of Workbench, then double click on the Workbench disk icon, followed by the Shell or CLI icon. Now type:

```
DISKCOPY FROM DF0: TO DF0:
```

or, if you have an extra disk drive, put a blank, formatted disk in DF1: and type:

```
DISKCOPY FROM DF0: TO DF1:
```

Follow the on-screen prompts until the copying procedure has ended, then put your original disk away in a safe place. Now switch off the machine and wait for 30 seconds before re-booting with the copy. Wait until the CoverDisk17 icon appears, double click on it and away you go.

That's all you need do to make a straight copy of the entire disk. However, you may also want to to copy individual programs from your copy of the coverdisk to a separate disk. In this case ensure that you fully understand which related files need to go with it.

For example, all of the document files on the disk require that the text editor PPmore is in the current disk's C: directory. Therefore, if you copy the docs to a new disk you will also have to copy PPmore to the new C: directory before you can read them.

Some of the smaller docs will not have been crunched, so for these you need only change the tool types on the icon's info screen to reflect whichever text editor you do have on the new disk.

As a general rule, you should carefully read the documentation for any program you copy from disk to disk.

This can save a great deal of messing about and can help you avoid all those infuriating error messages!

The Graphics Ripper

Author: Peter Edwards

Last month's coverdisk brought you Hunter for ripping samples out of memory. Now we offer The Graphics Ripper to do the same job on your favourite piccies, demos, or games backdrops.

Although not as easy to use as Hunter, TGR is not too difficult to get to grips with. It works on a similar basis as Hunter in that it relies on the Amiga not to wipe memory after a warm restart.

Although some commercial games will do this to prevent hacking and precisely the sort of graphics grabbing TGR is designed for, most leave enough around in memory to rip out.

You're not doing anything illegal if you rip graphics from PD demos, and if you grab screens from commercial games simply to look at and mess about with on your own, there's no harm done. Just don't try to make money out of it!

To begin ripping, boot up with your favourite demo or game and wait till you're sure the best graphics are in memory, then re-boot. It would be best to transfer TGR to a bare bootable disk – you can make one of these with Auto-Script – for this purpose as you ensure that memory is disturbed as little as possible by the re-boot.

Once TGR is up and running, you will find a selection of search controls relating to memory position, bitplane manipulation, and colour control.

The ins and outs of these can be found in the comprehensive on-disk documentation, but for fast results, just click on the FIND button at the bottom of the screen and move the mouse to scroll through graphics memory.

If all is well you should at least be able to spot some Workbench graphics, including icons and scroll bars. You should come across the graphics you're interested in if you persevere - remember that the PL1 to PL6 controls relate to the six bitplanes and are expressed in hexadecimal.

For owners of 512K Amigas, this means the area of concern is up to memory location $80000. For owners of machines with 1Mb chip RAM, such as A2000s and converted A500s, this is location $100000. Don't bother to search beyond these locations - graphics memory won't be found in the areas not directly accessed by the custom chips.

When you find the graphics you want TGR will save them to disk as IFF files – but beware of screen freezes. If the mouse seems to freeze while saving, the program has run into a problem such as a write-protected or full disk.

To release the mouse pointer press the left Amiga key and B at the same time. This is one of the program's quirks, but one you'll have to live with it if you want to rip graphics without resorting to the expense of a commercial cartridge gadget.

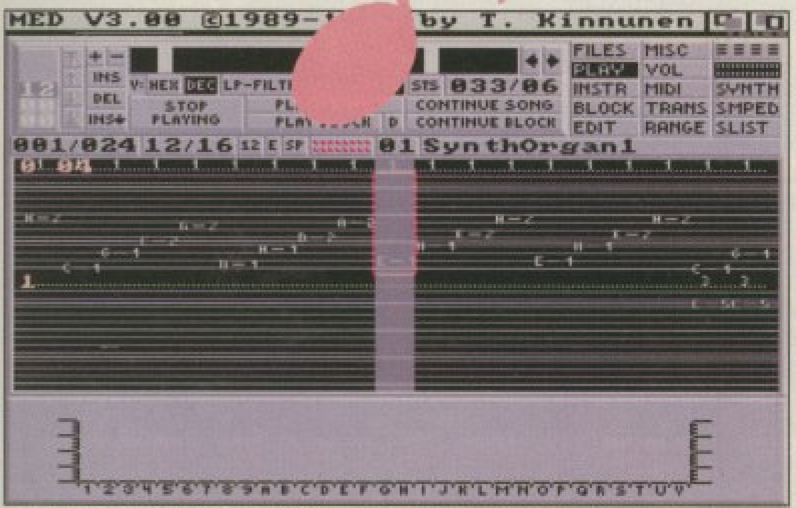
DISK

are very small in memory terms compared to their sampled cousins.

Sample Editor

With the inclusion of this feature MED has become something more than just one of the better Soundtracker clones. The sample editor transforms MED into a program rivalling commercial products like the Audiomaster/engineer packages – and all for a couple of quid.

MED can now control sampling from within itself using the sample ➤



To make it easier for beginners, MED can now display songs in a format closely resembling traditional musical scoring, and can swap between formats at a click

editor and the two important functions MONITOR and DIGITIZE.

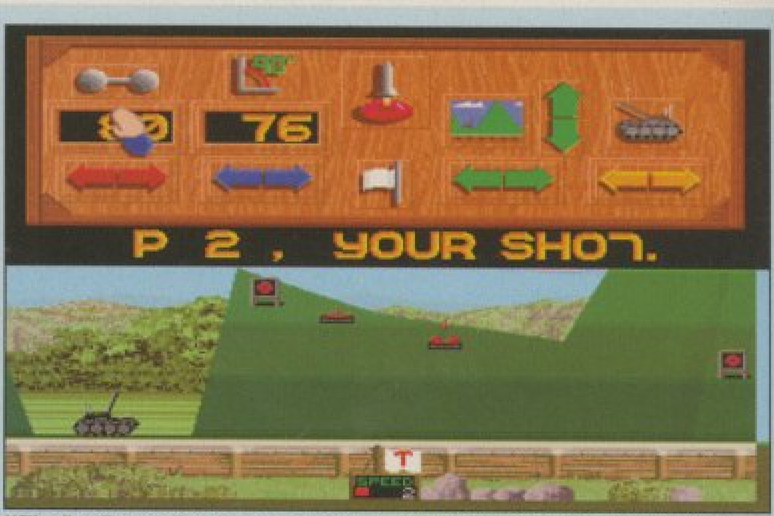
With a sampler up and running MONITOR will display the real-time signal in the editor's main panel. To begin sampling, click on DIGITIZE then on the left mouse button. The sample buffer will now start to fill up.

To stop sampling, click on the right mouse button or if you like just wait until the 131017 byte sample buffer is full.

Once the sample is in memory it will be displayed on the sample editor screen ready to be messed about with, and MED now offers several editing options for that very purpose. You can zoom and out, change the volume, add echo, define loops, and alter sample rates.

In addition, the sample can be moved up and down an octave at a click, or transposed to another rate, and thrown in and out of buffers with ease. When satisfied with your now mangled sample it can be saved in either RAW or IFF

The plethora of options ensures that TANX has long term appeal



With all options active, the game becomes incredibly difficult, and loads of fun!

Amiga-Tanx

Author: Gary Roberts

We guarantee this game will hook you faster than Jack Charlton with a trawl net! Amiga-Tanx is a two player tank shoot-it-out which we just couldn't stop playing. Its excellent sound and graphics provide instant appeal, while the deceptively simple gameplay is sure to keep you playing for hours.

The game is so colourful it takes up about 400k of chip RAM, so if you own a standard A500 be sure to run it with as few windows open as possible.

If you have problems, and the game runs out of memory, the best solution is to interrupt your startup-sequence using CTRL-D and then type:

```
cd game-of-the-month <return>
tanx <return>
```

The game will now run. The only problem with this approach is that once you quit out you will have to LOADWB or type EXECUTE S:STARTUP-SEQUENCE to access the rest of the disk in the usual way.

When loading has stopped you will see an options screen from which you control the game's complexity and thus its difficulty level. The options open to you control wind, gravity, landscape type, and shot affectors.

The relevance to your shot of wind and gravity are obvious - I defy you to hit the target with both on random! - and different landscape types such as mountains make it easier to hide from incoming shells.

The truly difficult options, however, are the shot affectors - pushers, pullers, and blowers.

Pushers and pullers are trampoline-type objects sporting bouncing arrows and they litter the landscape when the option is turned on.

Depending on the direction of the arrow, they will either pull the shot down towards them or push it higher in the air, making ranging on a tank which has one of these close by a bit of a nightmare.

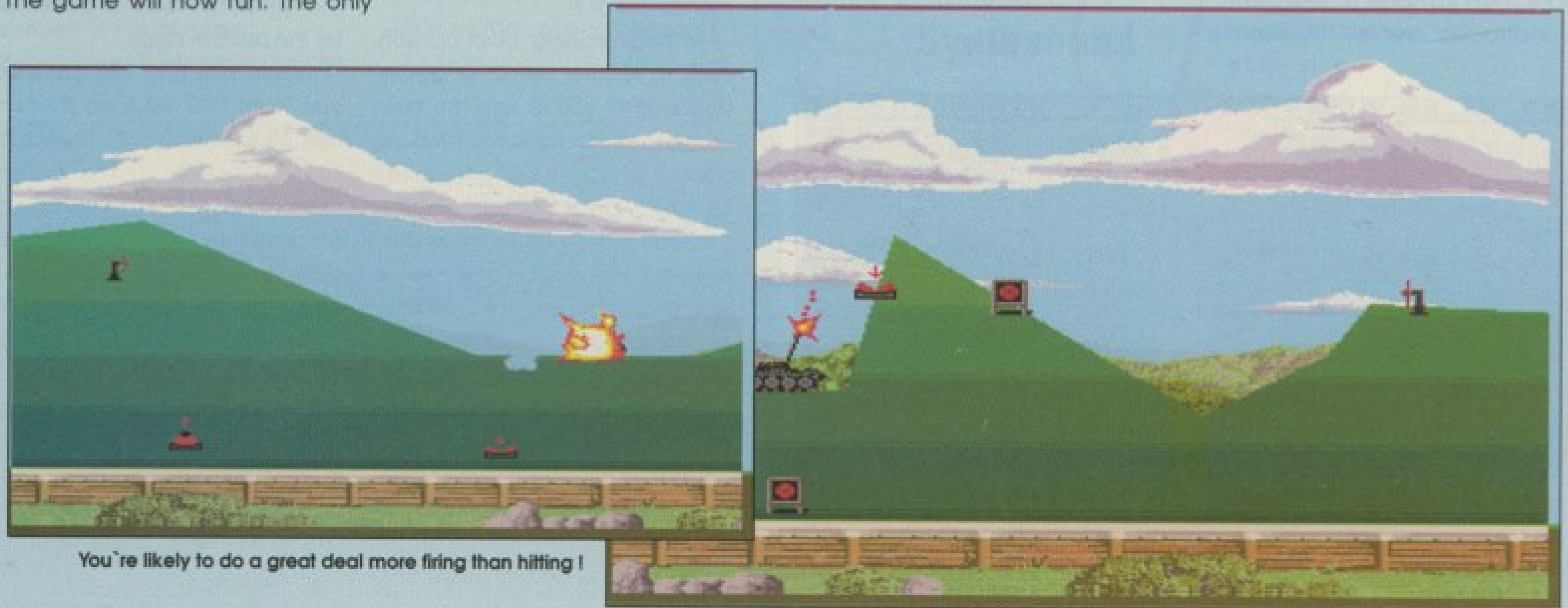
They can cause infuriating last minute deflections which will turn a certain hit into a clear miss.

Blowers are almost as difficult to cope with. They look like little windmills and cause lateral deflections by applying a puff of wind to any shot which strays too close.

When all the affectors are selected achieving a hit on target can be extremely difficult, and when random wind and gravity are selected things become even more uncertain.

As Amiga-Tanx is a two-player game – there's no one-player option – it soon develops into a highly entertaining battleships style shoot-out, with both players desperately attempting to hit the other first.

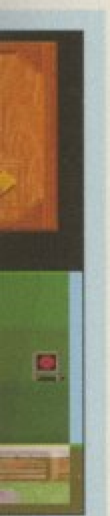
Parallax scrolling, sampled sound, and 50 frames-per-second action combine in this excellent coverdisk submission to deliver a game you won't be able to leave alone. Enjoy!



You're likely to do a great deal more firing than hitting !

olume, add
alter sam-

ble can be
octave at
to another
and out of
n satisfied
d sample it
RAW or IFF



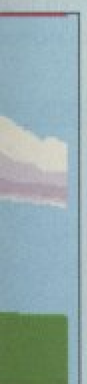
of fun!

lateral
a puff of
trays too

tors are
on target
cult, and
d gravity
me even

vo-player
e-player
os into a
hips style
yers des-
o hit the

ampled
r-second
excellent
deliver a
to leave



WE CUT PRICES DOWN TO SIZE

Take a look!

HOME COMPUTERS

AMIGA A500 MICROSNIPS PACK (bought separately £489)	£359.00
SPECTRUM PLUS 2 'JAMES BOND PACK' (usually £159)	£149.00
SPECTRUM PLUS 3 ACTION PACK (usually £199.95)	£129.00
ATARI 520 STFM DISCOVERY PACK inc 10 disks	£299.95
ATARI 520 STE TURBO PACK inc 20 disks	£399.95
CBM 64 PACK (usually £179.95)	£149.00
SAM COUPÉ (was £249)	£199.95

BUSINESS COMPUTERS

AMSTRAD PC1512 plus Software Pack, DD, Mono (was £499)	£399.00
AMSTRAD PC1512 plus Software Pack, DD, Colour (was £599)	£469.00
COMMODORE PC10 STARTER PACK (usually £499)	£399.00

MONITORS

COMMODORE 1084 Stereo Med.Res.Colour (was £299)	£239.00
PHILIPS 8833 MKII Med.Res.Colour (was £299)	£249.00
ATARI SM124 Hi Res.Mono (was £149)	£119.00

PRINTERS

STAR LC-10 Mono (was £199)	£179.00
PANASONIC KXP 1081 (MRP £199)	£179.00
STAR LC-24/200 (MRP £349)	£299.00
PANASONIC KXP 1124 (MRP £399)	£269.00
STAR LC200 Colour Printer (MRP £299)	£249.00
CITIZEN 120D+ (MRP £169)	£149.00

PAPER

BOX 2000 SHTS 60gsm PAPER (wood-free)	£15.95
BOX 2000 SHTS 70gsm PAPER	£17.95
BROTHER HR5 THERMAL PAPER	£7.95
TIMEX/ALPHACOM THERMAL ROLLS	5 for £11.95
ZX SILVER ROLLS	5 for £14.95

MODEMS, SOUND AND MIDI

PRISM VTX5000 MODEM (SPEC 48/+)	£39.95
COMMODORE 64 MODEM	£39.95

INTERFACES & ACCESSORIES

MULTIPRINT for SPEC 48k, 48k+, 128k, +2	~~£44.95~~	£39.95
CBM 64 CENTRONICS INTERFACE	~~£39.95~~	£29.95
AMIGA/ST/PC/CENTRONICS LEAD	~~£10.95~~	£8.95
AMSTRAD, +2a/+3 CENTRONICS LEAD	~~£10.95~~	£6.95
SPECTRUM COLOUR PRINTER DRIVER		£24.95
1000 1 ACROSS LABELS	~~£9.95~~	£6.95

DUSTCOVERS & SPARES

AMIGA DUSTCOVER	~~£8.95~~	£4.95
ATARI ST DUSTCOVER	~~£8.95~~	£4.95
SPEC +2/+3 DUSTCOVER	~~£8.95~~	£4.95
CBM 64 DUSTCOVER	~~£8.95~~	£4.95
ZX MEMBRANE	~~£11.95~~	£7.95
SPEC+ MEMBRANE	~~£11.95~~	£9.95

*** ALL COVERS STOCKED (CALL US) ***

MONITOR ACCESSORIES

AMIGA-SCART LEAD		£10.95
AMIGA-PHILIPS 8833 Mk2 LEAD		£10.95
ATARI ST-SCART LEAD		£10.95
ATARI ST-2 PHONO (Composite Video)		£10.95
SPEC+2a/+3-SCART LEAD		£8.95
CBM-SCART LEAD		£10.95
14" ANTI GLARE SCREEN FILTER	~~£19.95~~	£17.95
THINGI COPYHOLDER	~~£5.99~~	£2.99
ATARI ST-MULTISYNC MONITOR CABLE		£24.95
ATARI ST-COL. + MONO MONITOR CABLE		£24.95
TV/COMPUTER SWITCHING UNIT		£4.99

MAGNETIC MEDIA

3½" DSDD BULK DISKS	20 for £15.00
5¼" DSDD BULK DISKS 50 in lockable box	£24.95
TDK 3½" DSDD DISKS	10 for £11.95
TDK 5¼" DSDD DISKS	10 for £7.50
3"/3½" (state which) DRIVE HEAD CLEANER	£4.99
AMSOFT 3" CF2 DISKS	10 for £19.95

RECORDERS AND ACCESSORIES

DATACORDER inc +3 or 48k LEAD	£26.95
CBM LOAD 1T DATACORDER	£44.95
CBM 1530 DATACORDER	£39.95
CBM/SPEC/AMS HEAD ALIGNMENT (state which)	£8.95
+3 CASSETTE LEAD	£3.99

DISK DRIVES & RIBBONS

AMIGA Q-TEC 3½" EXTERNAL DRIVE (was £89.95)	£75.00
ATARI Q-TEC 3½" EXTERNAL DRIVE (was £89.95)	£75.00
CBM 1541 MKII DRIVE inc 8 GAMES (worth £200)	£139.00
AMS DDI-1 3" DRIVE and INTERFACE (was £159)	£99.00
AMS FDI 3" SECOND DRIVE (CPC6128 and +3) (was £99.95)	£79.95
SAM COUPE DRIVE	£79.95
STAR LC10 MONO RIBBON	2 for £7.90
STAR LC10 COLOUR RIBBON...Original	1 for £8.95
PANASONIC KXP 1081 RIBBON	2 for £7.90
CITIZEN 120D RIBBON	2 for £7.90

*** ALL RIBBONS STOCKED - CALL US ***

GRAPHIC DEVICES AND ACCESSORIES

AMIGA, ST, AMS PC1512 Q-TEC MOUSE (was £29.95)	£21.95
DATEL 48k/+2a GENIUS MOUSE inc ART STUDIO	£49.95
DATEL +3 GENIUS MOUSE inc ARTIST II	£49.95
DATEL 128k/+2 GENIUS MOUSE inc ADVANCED ART STUDIO	£49.95

JOYSTICKS

ALL TOP MAKES STOCKED

SOFTWARE

ALL CURRENT AND MANY OLD FAVOURITES STOCKED AT AFFORDABLE PRICES

FREE PRICE LIST SEND A4 STAMPED SAE 27p.

NEW STORES

BIRKENHEAD
25-29 GRANGE RD, WEST. 051-647 3377

WEST KIRBY
2 ACACIA GROVE. 051-625 9199

WALLASEY
MAIL ORDER and PERSONAL CALLERS
37 SEAVIEW RD, WALLASEY,
MERSEYSIDE L45 4QN.
051-630 3013 / 051-691 2008
FAX: 051-639 2714

BARCLAYCARD VISA | AMERICAN EXPRESS (WALLASEY ONLY) | LOMBARD TRICITY

BANK DRAFT
MASTERCARD
EUROCHEQUE

CARRIAGE CHARGES

UP TO £50	£2.00
£50-£99	£5.00
£100 Plus £10.00 Group 4 Courier	

INSTANT CREDIT ASK FOR DETAILS

OVERSEAS CUSTOMERS WELCOME
EUROPE: PRICES AS SHOWN.
OTHER COUNTRIES: ADD 5%.
(HEAVY ITEMS CARRIAGE EXTRA)

MICROSNIPS

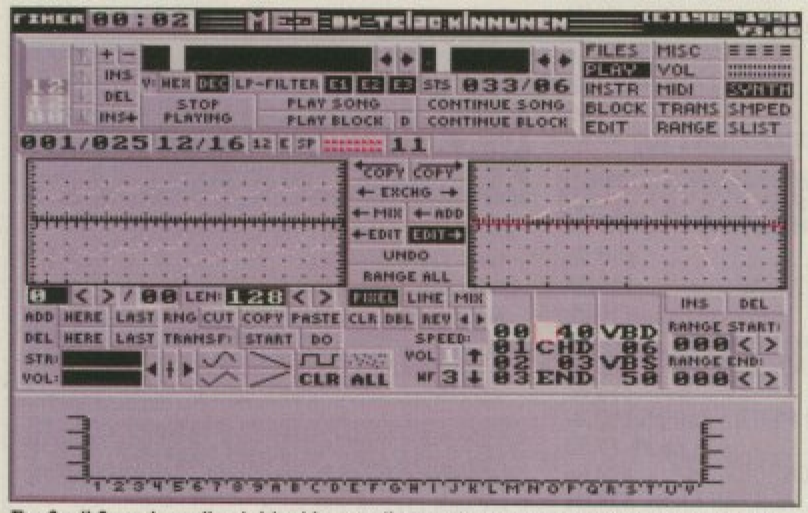
8SVX format for later use. Everything in this section smacks of Audiomaster on which it was apparently modelled. Indeed, MED is now so good that you need never leave the program. You can sample in MED, edit the samples, and finally compose your masterpiece.

Conclusion

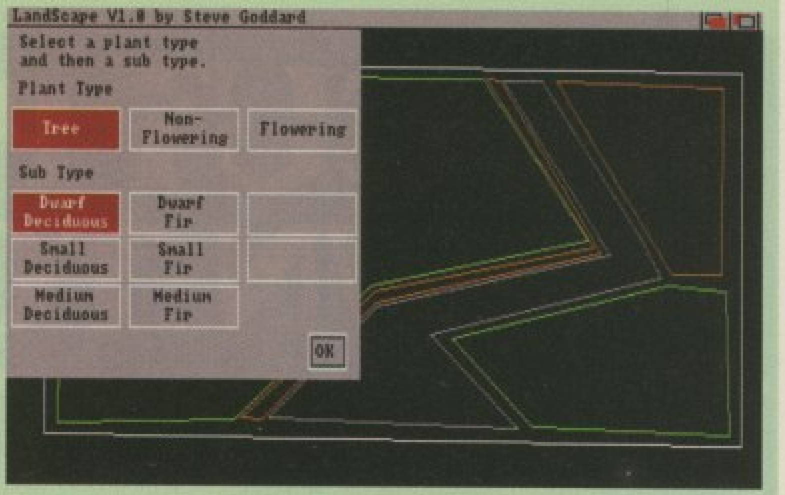
MED 3.00 is the best music program available in PD for the Amiga - it's as simple as that. The new features are excellent, and substantially add to the program's appeal.

Unfortunately constraints of space meant we could not bring you all the MED 3.00 files. We had to leave out the programmer's notes, demos, and most of the samples on the new disk, so if you want these and the all important source code get in touch with Ray at Amiganuts United PD on (0703 785680).

Don't forget that although the author, Teijo Kinnunen, has refrained from making MED shareware or going commercial, he is still not averse to receiving the odd fiver in the post. You'll find his address in the documentation on the disk.



The SynthSounds section is ideal for creating memory concious sounds of your own



LandScape

Author: Steve Goddard

If you're a gardener as well as an Amiga user you will find this highly original utility very useful. Even if you don't have a garden, and the mere thought of using a rake brings you out in cold sweats, you can't fail to appreciate the rare nature of this particular program.

LandScape is a garden generator which allows a prospective shovel-wielder to plan the layout of his or her corner of beautiful Britain before cutting a single sod.

This is one of the most novel uses we've seen an Amiga put to for some time, and it's a neat and interesting utility for even non-gardeners.

The program loads to a black screen with just a menu bar at the top. By accessing the first menu and selecting NEW, the second menu's garden building options become available.

From here you simply point and click with the mouse until the garden boundary, lawn, path, and areas of earth are set out, then go on to add plants.

The list of plants available isn't huge and merely offers general types, but as the program aims to give just a guide to how the garden will appear this isn't really a drawback.

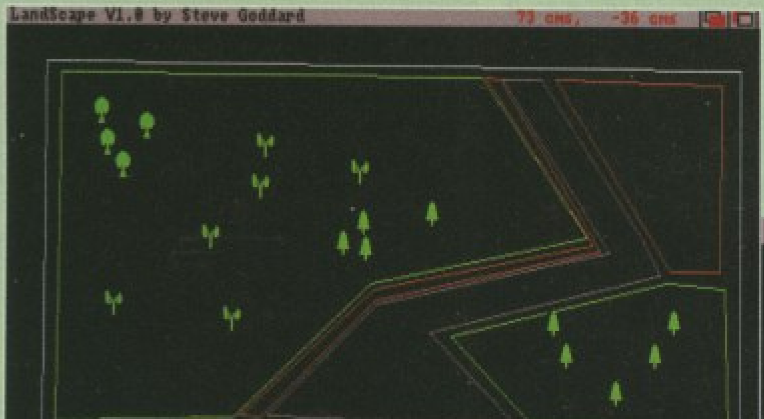
It is important at this stage to bear in mind the garden's dimensions as chosen at the start of the procedure. If you try putting a medium sized fir in a small garden there won't be much room left for a washing line missus!

When the design process is finished the garden is drawn from whatever viewpoint you select. This can take quite some time, as everything is mathematically calculated to look as close to real life as possible.

However, if you're prepared to go away and have a quick cuppa, the results on screen when you get back can be extremely pleasing. The drawing algorithms have obviously been carefully worked out.

The finished garden can now be saved to disk as an IFF file and touched up in DPaint if you like. There are only two omissions which damage the program - water and stone. We would have liked to have seen a pond/cascade design feature and a way of incorporating walls into the garden, but these are the only major moans.

Try LandScape and see if you could be the next Capability Brown!



From plan view to pseudo 3D simulated garden, LandScape makes designing easy

Explore the wide, wide world of communications with your computer...

Now – all the features of expensive modems. At a price that cannot be bettered anywhere!

Connect your EuroLink modem to your computer and telephone and you're ready to go – to explore the rapidly-expanding world that lies beyond your keyboard. It turns your computer into a COMPLETE communications centre...a telex machine, a fax machine, an electronic mail terminal. It lets you keep up to date with the latest news, sport and weather. It becomes a retrieval tool that lets you search out and store data from the world's leading electronic libraries. It enables you to download a wide variety of free software, from productivity packages to leisure programs. With your EuroLink modem you can access leading information services such as the UK's Prestel/ Micronet and Telecom Gold, a multitude of bulletin boards, and the biggest of them all, the world-beating CompuServe.

ONLY £229 +VAT

EXTRA!

Every purchaser of a EuroLink modem will be given FREE membership of CompuServe – the world's largest online information service. You'll be sent your own personal ID number and password, a copy of the monthly CompuServe magazine, and $15 FREE usage credit.

You will also find out how you'll be joining 700,000 other members in more than 100 countries all round the world, about the hundreds of special interest groups, including some dedicated to your own computer so that you can chat online to people with similar interests to yours. You will be told about the 1,400 plus databases you can reach through your keyboard, and the vast library of nearly 30,000 public domain and shareware programs you can download straight into your computer.

And CompuServe, plus your EuroLink modem, also turns your computer into a 24-hour fax and telex machine!

It's all you need to become part of a very friendly and helpful online community!

What the EuroLink modem offers

- *Four speeds – including 2400 baud*
- *Intelligent microprocessor controlled*
- *Autodial, Autoanswer, Auto redial*
- *Automatic baud rate scanning*
- *Auto terminal baud rate sensing*
- *Easy-to-understand built-in Help pages*
- *32-number telephone directory*
- *Six progress-checking LED indicators*
- *Software-controlled pulse/tone dialling*
- *External plug-mounted power supply*
- *Built-in 'watchdog' circuitry*
- *Internal loudspeaker*
- *Fully Hayes compatible*
- *Fully BABT approved*

APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them.

ORDER FORM

Please send me a EuroLink modem with power supply and lead to connect to my computer for the special offer price of £263.35 (incl. VAT and p+p.). Also send me my FREE CompuServe membership pack.

I wish to pay by: ☐ Cheque/Eurocheque enclosed made payable to EuroLink
☐ Access/Mastercard/Eurocard/Barclaycard/Visa/Connect Expiry date

No. _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ /

Name.................................Signed.................................

Address.................................

.................................Post Code.................................

Daytime telephone number in case of quieries ....

AMC5

My computer is.................................State make and model

Send to: Eurolink, Europa House, Adlington Park, Macclesfield SK10 4NP.

PHONE ORDERS: 0625 878888. FAX ORDERS: 0625 9966

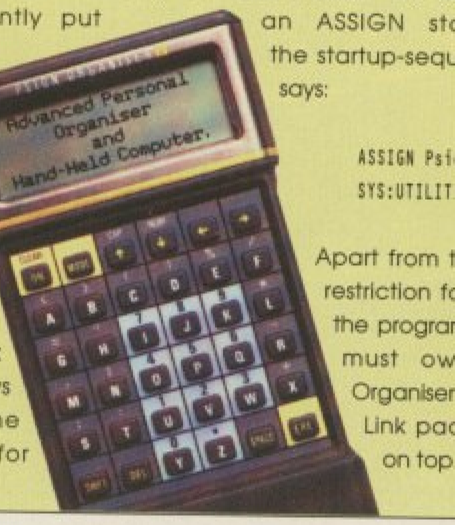
PsionLink

Author: Dave Westwood

When we first promised to bring you a method by which Amigas and Psion Organisers could talk to one another we didn't expect too many people to wave flags and cheer loudly.

So it was with some surprise that we read the steady stream of letters from Amiga users desperate to download files from their pocket pal.

A couple of months later than planned, we can at last bring you Dave's article and software on the process so many of you apparently put second only to continued respiration on your day-to-day list of priorities.



Now the Comms_Link program allows you to set the preferences for any file transfer through the Psion.prefs file which you'll find in the PsionLink drawer.

This contains default settings for stop bits, data length, baud rate and so on and must be present in the same directory as Comms_Link or it won't work.

Another restriction is that the directory in which Comms_Link resides MUST be called 'Psion:'. In other words, you must assign it as a logical device name.

For the purposes of the coverdisk, we've included an ASSIGN statement in the startup-sequence which says:

```
ASSIGN Psion:
SYS:UTILITIES/PSIONLINK/
```

Apart from this, the only restriction for the use of the program is that you must own a Psion Organiser with the PC Link pack which fits on top.

PPType

Author: Nico Francois

This isn't exactly a new program, and anyone with a recent release of Nico's excellent Powerpacker utility will already have PPType. However, for the majority of readers we suspect that PPType, being a realtively new addition to the PP range, will be invaluable.

It is a compact and easy to use printing program with which you can print out any ASCII text file, including those already crunched with Powerpacker.

The main prompt for its inclusion on this month's disk is the incredible length of MED's documentation, the reading of which from a monitor or TV screen would surely lead to major eye damage!

PPType uses Workbench preferences settings when printing, and requires the presence of either the parallel.device or serial.device handlers in the DEVS: directories.

You won't be able to use it directly from the coverdisk as there was no room for these files. However, this should present little problem - just copy the PPType drawer to your Workbench disk and use it from there.

The program can accept your own tab setting, and will print headers containing the file name and page number. As we said, it looks in Workbench prefs for printer type and page length and width, so you have more or less total control over the way the file prints out.

This control is carried out either through CLI parameters or by setting the tool types of the icon on the file to be printed.

Tool types such as HEADER=ON, which enables printing of file headers, allow users to create a standard Docs icon with PPType tool types already set.

Once this has been done, you need only copy and rename this icon, attaching it to whatever doc file is required for printing.

The most flexible way of using PPType is still through CLI or Shell. You'll find Nico's documentation brief but concise and useful.

Tune of the Month

Er - there isn't one. Unfortunately, the inclusion of MED v3 on this month's has meant there has been no space for memory-guzzling tunes and samples.

We are sure that music fans will forgive us when they get their hands on MED, but just to make sure we'll be putting a great tune on next month's cover disk.

Faulty Disk?

Subscribers If you subscribe to Amiga Computing and your disk has been damaged in the post, please return it to:
Amiga Cover Disk
Database Direct, FREEPOST, Ellesmere Port,
South Wirral, L65 3EB

Non-subscribers If you bought your magazine from a shops and found that the coverdisk was damaged, please return it within two months to:
Amiga Cover Disk, Stanley Precision, Unit F,
Cavendish Courtyard, Sallow Road,
Weldon North Industrial Estate, Corby,
Northants, NN17 1JX

Please allow 28 days for the delivery of your replacement disk.

Think you can do better? Want to be famous?

We are always on the lookout for new quality Amiga programs for the coverdisk. If you think you have written something good enough for others to share and enjoy, please send it in and we'll have a look.

The Amiga Computing coverdisk is used by thousands of Amiga owners every month in places all over the world from New Zealand to the U.S.A, so if your submission finds its way onto the disk, you could be famous!

Please make sure you list ALL Workbench and other files necessary for the program to work. Feel free to design your own icons for progs which run from Workbench, but please don't make them too big.

If you ensure your program is as compatible as possible with a wide range of Amigas, it will also stand a better chance of publication. We are especially interested in programs designed to work with the A3000, although if they work only with the new machine they'll have to be quite small.

We are prepared to pay our current rates for original work which hasn't been distributed in any other way and which has not been put in the public domain.

If you wish your program to be released as shareware or freeware we will be happy to publish it, but would, of course, be happier if we'd been given it first!

Your submission MUST be accompanied with the submissions form, a copy of it, or a signed declaration to the same effect. Please supply your full name address and phone number.

We cannot undertake to return disks sent to us as the volume of submissions makes this an impractical exercise.

Name .... Age ....

Address ....

....

....

....

Daytime phone .... Evening Phone ....

Submission name .... Submission size ....

You must sign this declaration

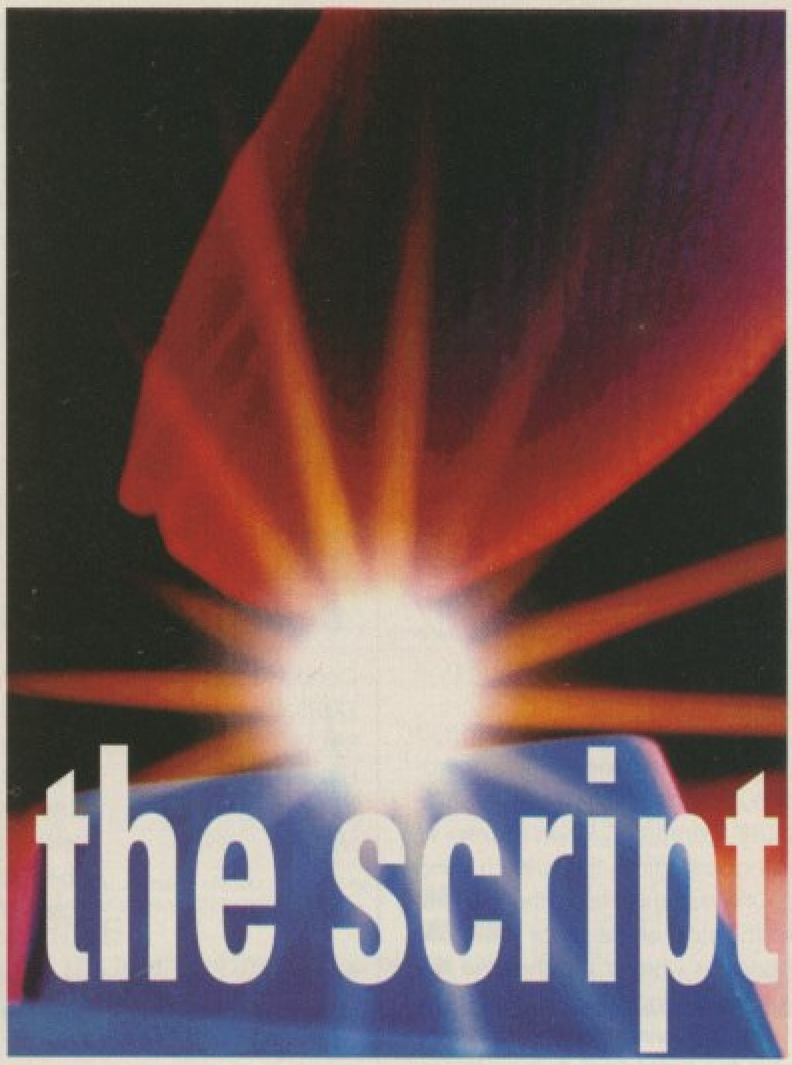
The stuff on this disk is mine. I didn't nick it off someone else. It hasn't been published before and I haven't submitted it elsewhere because I want *Amiga Computing* to publish it. I understand that by submitting my work to *Amiga Computing* and signing this declaration I am giving full copyright control to Interactive Publishing.
I understand that if my submission is bought by *Amiga Computing* I will be paid the current applicable rate. I know what copyright means and I will be responsible for any possible litigation arising from breach of it by Interactive Publishing as a result of using my submission.

Signed ....

Date ....

Post your submissions WITH A COPY OF THIS FORM to:
Stevie Kennedy, Amiga Computing,
CoverDisk Submissions, Europa House,
Adlington Park, Macclesfield, SK10 4NP

Stevie Kennedy finds he has batches in his belfry



Learning the script

If you've followed this series up to now you should be reasonably comfortable with AmigaDOS as an operating system, but may not have realised its true potential.

To do this, you'll have to begin to think of it as a crude programming language, and when you use script or batch files this is exactly what it becomes.

The startup-sequence, which we dissected last month, is the first script file most users encounter, and if you mastered the knack of playing around with and editing it by following last month's column, you should find little difficulty here.

Startup-sequences are typically simple scripts executed one command at a time from start to finish, so they usually don't contain any of the more advanced options open to script file writers.

We'll now take a more in depth look at the sort of trickery one can indulge in when using script files and examine some of the more complex tasks they can perform.

Pointer power

The script file we'll use as an example, Auto-Script, is listed here and is present on your coverdisk complete with its own icon. If you click once on this icon and use the Workbench INFO option, you will see that its default tool type is set to ICONX.

This is the routine which, if called as a default tool type, opens a CLI window and runs the script file, thus turning it into a crude program executable from Workbench.

If you choose to write a script file of your own, it should be simple enough to copy and rename the icon for use with your new script.

The AmigaDOS commands highlighted this month are the IF ... ELSE ... ENDIF group, ASK, LAB, and SKIP. By examining Auto-Script and following what it does, you should be able to use these commands in your own script files with little hassle.

The IF ... ENDIF command is one of the most important commands you might use in a script file. It is the most common way of testing for conditions, variables, and program parameters, and as such is one of the essential building blocks of any script. It has the syntax:

```
IF [Condition]
{Action1}
ELSE
{Action2}
ENDIF
```

This construction will be familiar to BASIC programmers, but may confuse beginners. When encountered in a script file, the IF command looks to see if the condition is satisfied. If so, the Action1 series of commands is carried out, then execution skips to ENDIF.

If the condition is NOT satisfied, the ELSE command forces execution of the Action2 sequence instead. The ELSE part is optional, but its use renders the whole a lot more flexible. With no ELSE statement, the execution of the script file would simply jump to the first command after ENDIF.

The first line of the script concerns variables and/or command parameters. The .key var1 line simply tells the Amiga that there is one program parameter called var1 which will be passed to it. Normally, if this isn't done in the EXECUTE

Fancy text effects

You'll notice from using Auto-Script that it uses text effects other than the standard type and colour. These special effects are accessible through commands within ECHO statements in the form *e(nm where n is one of the following numbers:

0 = cancels all effects	1 = bold text
3 = italicised text	4 = underline turned on
7 = inverted text	30 = text colour 0 (blue)
31 = text colour 1 (white)	32 = text colour 2 (black)
33 = text colour 3 (orange)	40 = background colour 0 (blue)
41 = background colour 1 (white)	42 = background colour 2 (black)
43 = background colour 3 (orange)	

For example, if you type ECHO "*e[1m*e[3m*e[4m*e[32mAmiga Computing*e[0m" you will get 'Amiga Computing' in bold, underlined, black italics, and text will be switched back to normal.

What does it do?

Auto-Script will give you the option to format a disk in df1: then will create an auto-booting system disk in that drive complete with Shell and KDVIII running from the startup-sequence. It will only work if you have an external drive as it's not worthwhile, given the limitations imposed by a single drive system, to write a script to do the same job for df0:

You must run Auto-Script from a system disk containing all the files expected to be copied across. Specifically, you must ensure that SimpleStart is in your S: directory, and KDVIII and SIZE in your C: directory.

command using the form EXECUTE <scriptname> <parameter>, the command in question assumes a null entry.

Auto-Script doesn't utilise true variables – we'll cover those next month – but it does require certain values to be passed to it in answer to ASK commands. This command has the syntax

```
ASK "<string>"
```

It halts operation of a script file, prints the string, and polls the keyboard until a key is pressed. If ASK detects the Y key, it returns a WARN – returncode value 5 – and carries on. Any other key results in a zero returncode and the resumption of the script file.

Please note that though it makes no difference to the operation of Auto-Script when you EXECUTE it from CLI, when you try to run a script from Workbench using ICONX you must have the .key line at the start of the script or it goes bananas when it reaches the first ASK command.

Try removing the line and running the script from its icon to see what I mean. With the line in place, Auto-Script will halt obediently at the ASK command and await a keyboard entry.

Used this way in conjunction with the IF ... ENDIF sequence and the conditions WARN and NOT WARN, the ASK command can carry out simple question and answer operations and redirect program operation accordingly.

Auto-Script's main sequence contains an ASK command leading into an IF ... ELSE ... ENDIF sequence which itself contains a nested ASK command with its own IF WARN ... ENDIF test.

Nesting, for those unfamiliar with the term, is the practice of using loops within loops or routines within routines, and is often essential if more complex tasks are to be carried out.

This can make it more difficult to follow a program's operation when you have to match an IF to the correct ENDIF, but if you want to use AmigaDOS script files you'll just have to live with it.

Initial confusion would be an understandable reaction for the first timers faced with such commands and techniques. They are, after all, more akin to programming than to the basic use of an operating system.

However, if you carefully trace the operation of Auto-Script as the questions are asked and answered, and follow the way the script branches in response, you should quickly become familiar with their possible uses.

The box-out contains a list of the conditions you can test using the IF command.

The LAB and SKIP commands are used in a GOTO type way. In Auto-Script the last line is LAB end, and if you answer no to the question "Do you want to continue?" the script will print a quit message then carry out the line SKIP end.

The effect is just to skip all the lines up to the one containing the label end, denoted by the LAB command.

If you are using Workbench 1.3 or later, you can also SKIP backwards using the optional BACK command. This gives scripters the opportunity to write much more flexible script files by allowing for simple loops.

It would be relatively easy to alter Auto-Script so that it asked you how many system disks you wished to create, then loop round until this number had been created before quitting out. Primitive, perhaps, but effective enough.

Conditions for the IF ... ENDIF command

Condition	Description
EXISTS <filename>	Satisfied if the file exists
FAIL	Satisfied if the returned error code is >20
ERROR	Satisfied if the returned error code is >10
WARN	Satisfied if the returned error code is >5
NOT	Satisfied if condition not satisfied (think about it)
<x> EQ <y>	Satisfied if x = y

Plus the following operators available only under Workbench 1.3 and above:

VAL	Forces testing of condition as a number rather than a string
<x> GT <y>	Satisfied if x is greater than y
<x> GE <y>	Satisfied if x is greater than or equal to y
<x> LT <y>	Satisfied if x is less than y
<x> LE <y>	Satisfied if x is less than or equal to y

Listing of Auto-Script

```
.key var1
PATH SYS:SYSTEM ADD
FAILAT 21
ECHO " "
ASK "   *e[33mDo you wish to continue?
[Y/N] "
IF WARN
ECHO " "
ASK "   Do you want to format a disk
in df1: ?"
IF WARN
ECHO " "
FORMAT DRIVE DF1: NAME bootable
ENDIF
ECHO " "
ECHO "   *e[43m*e[32mNow creating
bootable system disk!*e[0m" ECHO " "
ECHO " "
ELSE
ECHO "   *e[32mO.K. Bye Bye!*e[0m"
ECHO " "
SKIP end
ENDIF

CD df1:
LAB makedrawers
ECHO "   Creating directories"
MAKEDIR c
MAKEDIR s
MAKEDIR devs
MAKEDIR l
MAKEDIR libs
MAKEDIR system

CD df1:devs
MAKEDIR printers
MAKEDIR keymaps
LAB COPYfiles
ECHO " "
ECHO "   Copying files across ...
please wait"

CD C:
COPY shell.info TO df1:
COPY brun TO df1:c
COPY COPY TO df1:c
COPY cd TO df1:c
COPY dir TO df1:c
COPY endcli TO df1:c
COPY format TO df1:c
COPY diskCOPY TO df1:c
COPY ECHO TO df1:c
COPY execute TO df1:c
COPY iconx TO df1:c
COPY kdviii TO df1:c
COPY loadwb TO df1:c
COPY mount TO df1:c
COPY prompt TO df1:c
COPY resident TO df1:c
COPY setpatch TO df1:c
COPY SIZE TO df1:c
COPY run TO df1:c

CD l: COPY ram-handler TO df1:l
COPY disk-validator TO df1:l
COPY Shell-Seg TO df1:l
COPY Newcon-Handler TO df1:l

CD libs: COPY icon.library TO df1:libs
COPY info.library TO df1:libs

CD s: COPY shell-startup TO df1:s
COPY SimpleStart TO df1:s
RENAME df1:s/simplestart
df1:s/startup-sequence

CD devs: COPY mountlist TO df1:devs
COPY system-configuration TO df1:devs
COPY printers/generic TO
df1:devs/printers
COPY keymaps/gb TO df1:devs/keymaps
CD SYS:system
COPY cli TO df1:system
COPY setmap TO df1:system
INSTALL drive df1:
ECHO " "
ECHO "*e[33m*e[1m   VOILA! *e[32mOne
bootable system disk!*e[0m"
ECHO " "
LAB end
```

Next month

We'll go on to look at variables, including environment variables, and how to use them in script files to realise the full potential of AmigaDOS.

contains a
with its own

familiar with
ce of using
utines within
essential if
to be car-

e difficult to
ation when
n IF to the
ou want to
es you'll just

uld be an
ion for the
such com-
. They are,
program-
use of an

efully trace
cript as the
ted and
e way the
onse, you
e familiar

a list of the
using the IF

ommands
be way. In
s LAB end,
the ques-
continue?"
t message
IF end.
kip all the
aining the
y the LAB

bench 1.3
SKIP back-
nal BACK
ripters the
uch more
lowing for

y easy to
t it asked
disks you
oop round
n created
itive, per-
gh.

h
variables,
variables,
in script
tential of

VISIT OUR FULHAM SHOWROOM

PLEASE CALL FOR LATEST RELEASES

PLEASE CALL FOR LATEST RELEASES

SK MARKETING

COMPUTER SUPPLIES

AMIGA HARDWARE

SCREEN GEMS PACK
A500, TV Modulator, Mouse, Star LC10, Cable, Kindwords 2, Fusion Paint, Miniature Golf, Super Ski, Crazy Cars
ONLY £549

10 STAR GAMES PACK – £30

AMIGA 1500

2 x 3½" Drives	Sim City
1Mb Ram	Battlechess
1084S Monitor	Battle of Brit
Platinum Works	Deluxe Paint III
Populus	+ 10 other games.

£975.00

A590 20MB Hard Drive	£289.95
Philips 8833 Monitor	£230.00
Commodore 1084S Col. Monitor	£259.95
A501 Ram Expansion/Clock	£129.95
Video Digitizer	£99.95
Half Meg RAM expansion ....with clock	£45.00
without clock	£40.00
Zydec 3.5" Drive	£69.96

AMIGA SOUNDBLASTER
including sound amplifier with stereo speakers + headphones
You have to hear it to believe it
£49.99

AMIGA B2000 .... P.O.A.

AMIGA HARDWARE

AMIGA 500, MOUSE + PSU – £329

NAKSHA MOUSE + MOUSE MAT – £32.50

SCREEN GEMS PACK – £369

SCREEN GEMS + 10 STAR GAMES PACK – £385

SCREEN GEMS PACK + 1MB UPGRADE – £399 (COMMODORE ORIGINAL)

FIRST STEPS – £539

PHILIPS 8833 MkII MONITOR – £269.95

NEW HAND SCANNER

* By Golden Image
* Inc. Touchup Software
* Supports IMG, IFF, TIFF, Delas + more
* 100/200/300 or 400 DPI
* Requires 1Mb + DS Drive
* Full Technical Support

£195.00

CONTROL CENTRE

Instantly transform your Amiga 500 into an A1000/2000 'look a like' without any modification to the computer. Simply slip the 'control centre' over the Amiga 500 and by reason of its colour match and contour hugging design it becomes an integral part of the computer itself.

- Hides untidy connections at rear of A500
- Holds disk drives, genlocks etc...
- Easy access to joystick ports
- Monitor sits about A500

£54.95

BOOKS

Advanced Amiga BASIC	£18.95
Advanced Syst Prog Gde Amiga	£32.45
Amiga 3D Graphics Prog BASIC	£18.45
Amiga Applications	£16.95
Amiga Assembly Lang Prog	£14.45
Amiga BASIC Inside & Out	£18.95
Amiga C Advanced Programmers	£32.45
Amiga C for Beginners	£18.45
Amiga DOS Inside & Out	£18.45
Amiga DOS	£14.95
Amiga DOS Quick Reference	£8.95
Amiga DOS Ref Guide	£14.95
Amiga Desktop Video	£18.45
Amiga Desktop Video Guide	£18.45
Amiga Disk Drives Inside & Out	£27.95
Amiga For Beginners	£12.95
Amiga Gd Graphics Sound Teleco	£17.45
Amiga Graphics Inside & Out	£32.45
Amiga Hardware Ref Manual Rev	£21.95
Amiga Machine Lang Guide	£21.95
Amiga Machine Language	£14.95
Amiga Microsoft Basic Prog Guide	£18.45
Amiga Prog Handbook Vol. 1	£24.95
Amiga Prog Handbook Vol. 2	£23.95
Amiga Programmers Guide	£17.45
Amiga Programmers Guide	£20.45
Amiga ROM Kernel Ref Man Autod	£28.95
Amiga ROM Kernel Ref Manual	£29.95
Amiga ROM Kernel Ref Man Lib	£32.95
Amiga System Programmers Guide	£32.95
Amiga Tricks and Tips	£14.95
Becoming an Amiga Artist	£18.45
Beginners Guide to the Amiga	£16.95
Compute's 1st Book of Amiga	£16.95
Compute's 2nd Book of Amiga	£16.95
Elementary Amiga BASIC	£14.95
Inside Amiga Graphics	£16.95
Inside the Amiga with C 2nd Ed	£24.50
Kickstart Guide to the Amiga	£13.95
Kids & the Amiga	£15.95
Mapping the Amiga	£20.95
More Tips & Tricks for Amiga	£18.45
Programmers Guide to the Amiga	£23.95

DOT MATRIX PRINTERS

Star LC10	£173
Panasonic KX-P1124	£260
Panasonic KX-P1180	£190
LC200 9 pin col.	£230
LC24-200 24 pin mono	£265
LC24-200 24 pin col	£310
LC24-10	£265

PROFESSIONAL AMIGA SOFTWARE

9 out of 10	£29.95
Animator/Images	£89.95
Animator	£39.95
Animator 3D	£99.95
Arena Accounts	£149.95
C-Light	£39.95
Comic Setter	£44.95
Deluxe Paint II	£49.95
Deluxe Paint III	£64.95
Deluxe Print 2	£39.95
Deluxe Music Construction	£54.95
Deluxe Productions	£99.95
Deluxe Photolab	£54.95
Deluxe Video	£65.95
Digipaint III	£54.95
GFA Basic Compiler	£39.95
Distant Suns	£37.99
GFA Basic Interpreter III	£39.95
Hisoft Devpac V2	£39.95
Hisoft Lattice C	£175.95
Home Accounts	£22.95
Home Office Kit	£104.95
Infofile	£34.95
Instant Music	£21.95
K-Data	£34.95
K-Gadget	£19.95
K-Seka	£29.95
K-Spread III	£75.00
K-Text	£14.95
Kind Words V2	£33.95
Mailshot Plus	£40.95
Maxiplan Plus	£49.90
Music X	£169.00
Personal Finance Manager	£27.50
Photon Paint 2	£54.95
Powerworks	75.00
Prodata	£59.95
Protext	£64.95
Protext V.5	£105.00
Publishers Choice	£74.95
Quartet	£39.95
Sound Express Stereo Sampler	£39.99
Starter Kit	£54.00
Superbase Personal	£29.95
Superbase Personal II	£65.95
Superplan	£69.95
TV Show	£59.95
Vista	£49.00
Vista Pro	£89.00
Word Perfect	£185.00
Workbench 1.3	£15.00
Zoetrop (5 in 1 package)	£79.95

LEISURE SOFTWARE

688 Attack Sub	£16.99
9 Lives	£17.50
*Action Stations	£19.99
*Adidas Championship Football	£16.99
Amos – Game Creator	£35.99
Ancient Battles	£17.50
Answer Back Junior Quiz	£15.99
Apprentice	£17.50
Armour-Geddon	£17.95
Ant Heads Data Disk	£11.99
*A.W.E.S.O.M.E.	£23.99
Back to the Future II	£16.99
Bad Company	£17.50
Badlands	£17.50
Bar Games	£19.90
BAT	£21.50
Battlemaster	£16.99
Battle of Britain (Finest hour)	£19.99
Battle Chess	£16.99
*Battle of Austerlitz	£16.99
*Betrayal	£19.99
*Blade Warrior	£16.99
Blitzkrieg May 1940	£17.45
Blood Money	£16.99
*Bomber	£21.90
BSS Jane Seymour	£16.99
Buck Rodgers	£23.50
*Budokhan	£17.45
*Cadaver	£16.99
*Carthage	£16.99
Carvup	£16.90
Castle Master	£16.99
Champions of Krynn	£19.99
Chaos Strikes Back (1Mb)	£17.45
Chase HQ 2	£17.50
Codename Iceman	£27.99
Combo Racer	£17.45
Conqueror	£17.45
Colonels Bequest	£27.99
Corporation	£16.45
*Cartoon Capers	£14.99
*Chrono Quest II	£19.90
Curse of RA	£17.50
Days of Thunder	£16.99
Death Trap	£17.50
Dragons Breed	£17.50
Dragons Breath	£19.99
Dragon Flight	£17.50
Dragons Lair II	£34.90
Dragons of Flame	£16.99
Drakhen	£19.99
Dungeon Master	£16.99
Dungeon Master Editor	£8.99
East v West	£16.99
Emlyn Hughes Int. Soccer	£16.99
Elite	£16.99
Enterprise	£16.90
ESWAT	£17.50
Everton F.C. Intelligension	£14.99
F-16 Combat Pilot	£16.99
F-19 Stealth Fighter	£19.99
F-29 Retaliator	£16.99
Fighter Bomber	£19.99
Final Conflict	£17.50
Final Countdown	£17.50
Falcon	£19.99
Falcon Mission 1	£14.99
Falcon Mission 2	£14.99
Flood	£16.99
*Final Battle	£16.99
Fire & Brimstone	£16.99
Flight of the Intruder	£21.50
Flimbo's Quest	£16.99
Future Wars	£16.99
Gazza II	£17.50
Golden Axe	£19.99
Grand Prix Circuit	£16.99
Gunship	£16.99
Hardball 2	£16.99
Heroes Quest	£24.99
Hound of Shadow	£16.99
Honda RVF	£16.99
Imperium	£16.99
Indiana Jones Adventure	£16.99
Indiana Jones Action	£14.99
Infestation	£16.99
International 3D-Tennis	£16.99
International Soccer Challenge	£17.50
Interphase	£17.50
It Came from the Desert	£20.99
Ivanhoe	£16.99
Jack Nicklaus Golf	£16.99
Jack Nicklaus Int. Courses	£10.99
James Pond	£17.50
Judge Dredd	£16.50
Jumping Jackson	£13.99
Kick Off 2	£16.99
Kick Off 2 Final Whistle	£12.99
*Kid Gloves	£15.90
Klax	£14.99
Knights of Crystallion	£19.99
Leisure Suit Larry	£14.99
Leisure Suit Larry 2	£24.99
Leisure Suit Larry 3	£27.99
Line of Fire	£17.50
Lombard RAC Rally	£16.99
Loom	£19.99
*Legend of the Lost	£16.99
Lost Ninja 2	£16.99
Lost Patrol	£16.99
Lotus Esprit Turbo	£17.50
Manhunter	£19.99
Manhunter 2	£19.99
Manchester United	£16.99
Maniac Mansion	£16.99
Master Blaster	£17.50
Mega Maths	£19.99
Midnight Resistance	£16.99
Midwinter	£19.99
Might & Magic	£21.95
Might & Magik 2	£19.99
*Murder	£19.99
Murder in Space	£17.50
Mad Professor Mariarti	£17.50
Narc	£17.50
Narco Police	£17.50
Nitro	£17.50
*Necronom	£16.99
Neuromancer	£17.45
Newcomer	£19.99
New Zealand Story	£16.99
New York Warriors	£19.99
Night Breed	£16.90
Ninja Spirits	£16.99
Ninja Warriors	£16.99
Nitro	£17.50
Nuclear War	£17.45
Obitus	£23.50
Operation Harrier	£17.50
Operation Spruance	£19.90
Operation Stealth	£16.99
Overrun	£20.90
*Oriental Games	£16.99
Pang	£17.50
Pipemania	£16.45
Pirates	£16.99
Punisher	£16.99
Police Quest	£17.45
Police Quest 2	£24.95
Pools of Radiance	£20.90
Populous	£16.99
Populous Data Disk	£9.99
Powermonger	£21.90
Primary Maths Course	£19.99
Precious Metal	£16.99
Projectyle	£16.99
Pro Soccer 2190	£17.50
Pro Tennis Tour	£16.99
Punisher	£16.99
RANX	£17.45
Red Storm Rising	£16.99
Resolution 101	£17.45
Rick Dangerous	£16.45
*Rick Dangerous II	£17.45
Riders of Rohan	£21.50
Rings of Medusa	£17.99
Robocop 2	£17.50
Rorkes Drift	£16.99
Rotox	£16.99
Second Front	£20.90
Shadow of the Beast II	£23.99
Shadow Warriors	£16.99
Sherman M4	£17.45
Silent Service	£19.99
Sim City	£19.99
Sim City Terrain Editor	£11.95
Skid 2	£14.99
*Sly Spy	£16.99
*Snowstrike	£17.50
Space Ace	£32.95
Space Harrier II	£17.50
Space Quest 1	£17.45
Space Quest 2	£17.45
Space Quest 3	£24.99
Space Rogue	£19.99
Speedball 2	£17.90
*Street Hockey	£16.99
Stunt Car Racer	£16.99
Sword of Aragon	£19.99
Sword of Twilight	£19.99
*Starblade	£16.99
Team Yankee	£23.50
Teenage Mutant Turtles	£17.45
Tennis Cup	£16.99
Test Drive 2	£16.99
*The Killing Game Show	£21.90
The Powerpack	£23.50
The Punisher	£16.99
The Third Courier	£17.50
*The Spy Who Loved Me	£16.99
*The Ultimate Ride	£16.99
Third Courier	£16.99
Thrill Time Platinum II	£19.99
Thunderstrike	£16.99
Tie Break	£16.99
Total Recall	£17.50
Tournament Golf	£17.50
Toyota Celica Rally	£17.50
Trivial Pursuit	£17.50
Turrican	£13.99
Tusker	£16.99
The Plague	£16.99
TV Sports Football	£19.99
TV Sports Basketball	£19.99
Time Soldier	£16.45
Treasure Trap	£16.99
Triad III	£19.99
Twin World	£17.50
*Ultima V	£19.99
*UMS 2	£19.99
Unreal	£19.99
Ultimate Golf	£16.99
*Universe 3	£16.99
UN Squadron	£17.50
Vaxine	£17.50
Venom Wings	£17.50
War Games	£19.99
*War Jeep	£16.99
*White Death	£19.99
Wings of Death	£17.50
Wolfpack (1Mb)	£23.50
Xipos	£17.50
Zac McKraken	£15.90

N.B. Some of the above titles may not have been released and some of the older titles may have been deleted.

EDUCATIONAL

Fun School 2 (under 6's)	£13.99
(6 to 8's)	£13.99
(Over 8's)	£13.99
Fun School 3 (under 5's)	£16.45
(5 to 7's)	£16.45
(Over 7's)	£16.45
Magic Maths (4-8yrs)	£18.99
Maths Mania (8-12yrs)	£18.99
Better Spelling (8-Adult)	£18.95
Sesame St Letters	£16.90
Sesame St Numbers Count	£16.90
Discover Maths	£13.90

LATEST RELEASES

A.D.S.	£17.50
Battle Storm	£17.90
Blue Max	£21.50
Bomber Bob	£17.50
Chips Challenge	£17.90
Conquest of Camelot	£28.90
Crime Wave	£17.90
Donald's Alphabet Chase	£17.90
Exterminator	£17.90
Fists of Fury	£17.90
Feudal Lords	£17.50
GO	£17.50
Goofy's Railway Express	£17.90
Hard Driving II	£21.00
High Energy	£17.90
Horror Zombies/Crypt	£17.50
International Ice Hockey	£17.50
Kick Boxing	£17.50
Kings Quest Tripple Pack	£29.90
Lemmings	£19.90
Mickey's Runaway Chase	£17.90
Mig 29	£24.90
Mighty Bombjack	£17.90
MUDS	£17.90
Nightshift	£17.50
Revelation	£17.50
Sporting Winners	£16.50
Striker	£17.90
Swiv	£17.50
Team Suzuki	£17.90
Thalion hte 1st Year	£17.50
Turn 'N' Burn	£16.90
Turrican II	£17.90
UMS II	£21.50
World Cham Boxing Mgr.	£16.90

24 hour hotline for credit card orders

Access VISA

All prices subject to change without notice

All goods subject to availability. Titles marked * may not be released and will be sent on the day of release (subject to availability).

SALES HOTLINE

0923 89 69 69

(MAIL ORDER)

To order: Please send cheque/PO/Access or Visa details to SK Marketing Ltd, 13 Moneyhill Parade, Uxbridge Road, Rickmansworth, Herts, WD3 2BE,

All prices include VAT and carriage is free (UK mainland)

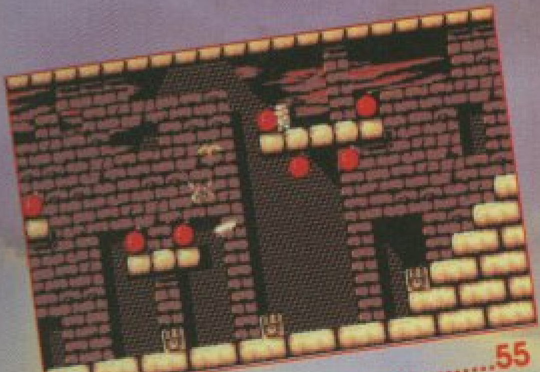
South London:
10 Fulham Broadway
London SW6 1AA
Tel: 071 381 6618
Fax: 071 381 0528

North London:
13 Moneyhill Parade
Uxbridge Road
Rickmansworth
Herts WD3 2BE
Tel: 0923 896969
Fax: 0923 771058

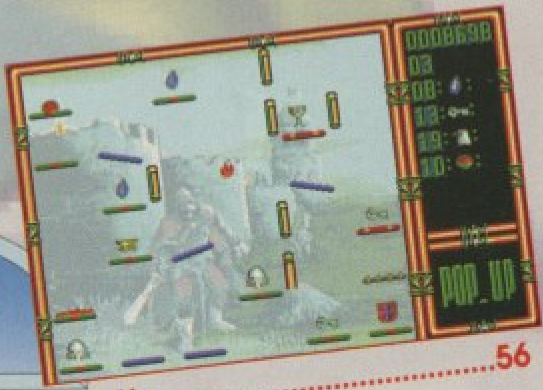
PERSONAL CALLERS WELCOME AT BOTH SHOWROOMS

MONDAY-SATURDAY 9.30am - 5.00pm

VISIT OUR RICKMANSWORTH SHOWROOM



Game Zone



Gallup Chart

1	Lemmings	Psygnosis	£24.99	11	Little Puff	Code Masters	£6.99
2	Speed Ball 2	Mirrorsoft	£24.99	12	A10 Tank Killer	Sierra Online	£34.99
3	Turrican 2	Anco	£24.99	13	Super Hang On	Hit Squad	£7.99
4	Final Whistle	Anco	£12.99	14	Kick Off 2	Anco	£24.99
5	Fantasy World Dizzy	Code Masters	£6.99	15	Fists of Fury – 2	Virgin	£29.99
6	R-Type	Hit Squad	£7.99	16	Super Scramble Simulator	Kixx	£9.99
7	SWIV	Storm	£24.99	17	Super Grand Prix	Code Masters	£9.99
8	F19 Stealth Fighter	Microprose	£29.99	18	Gauntlet 2	Kixx	£7.99
9	Mig-29 Fulcrum	Domark	£24.99	19	M1 Tank Platoon	Microprose	£24.99
10	Treasure Island Dizzy	Code Masters	£4.99	20	Moonwalker	Kixx	£7.99

Chart compiled by Gallup Ltd © 1991 European Software Publishers Assotion

Robin Hood Computers

Robin Hood Computers
Dept.
Units 34/36 West End Arcade
off Upper Parliament Street
NOTTINGHAM
NG1 6JZ

order hotline - (0602) 502255
FAX. - (0602) 508980

How to order:

Post by cheque or postal orders (please allow 7 days for cheque to clear)

Credit card hotline (0602) 502255 - Access/Visa

All prices include V.A.T.

Post £3.95, next day carrier £9.95

All orders despatched same day subject to stock.

Ask for details of our VIP Club!!

AMIGA

Standard Amiga A500

includes mouse, modulator, power supply workbench & books, etc.

ONLY £329.95

A500 Screengems Pack

ONLY £369.95

Amiga Starter Pack

includes Standard Amiga & 0.5 Meg Upgrade & Cumana CAX 354 External Disk Drive

ONLY £399.95

Accessories

3½" Discs DS DD 135 Tpi - £19.50 for 50 £38.00 for 100
(100% Error Free - Bulk Buyers ring for quantity discounts)

3½" 40 Capacity lockable box - 2 keys -	£3.75
3½" 80 Capacity lockable box - 2 keys -	£4.75
3½" 100 Capacity lockable box - 2 keys -	£5.95
3½" Posso 150 capacity box - stackable -	£15.95
Mousemat 6mm Neoprene boxed	£3.75
Printer Cable	£7.95
Amiga Dustcover	£3.99
4 megabyte baseboard as reviewed	£99.95
Roll 1000 Disk labels	£6.95
Quickshot Turbo III	£9.95
Quickshot Starfighter I infra red remote control	£34.95

& huge range of Amiga PD
99p each. Send for list & 20%
all software. Lots, lots more,
come in and see!

Star LC10 Printer
£169.95

Star LC24/200 Printer
£284.95

Star LC24/200 Colour
£309.95

Cumana CAX 354 External Drive
£69.95

Golden Image 3½ External Drive with Track Display
£89.95

½ Meg Upgrade "Cortex"
£29.95 - £34-95 (with clock)

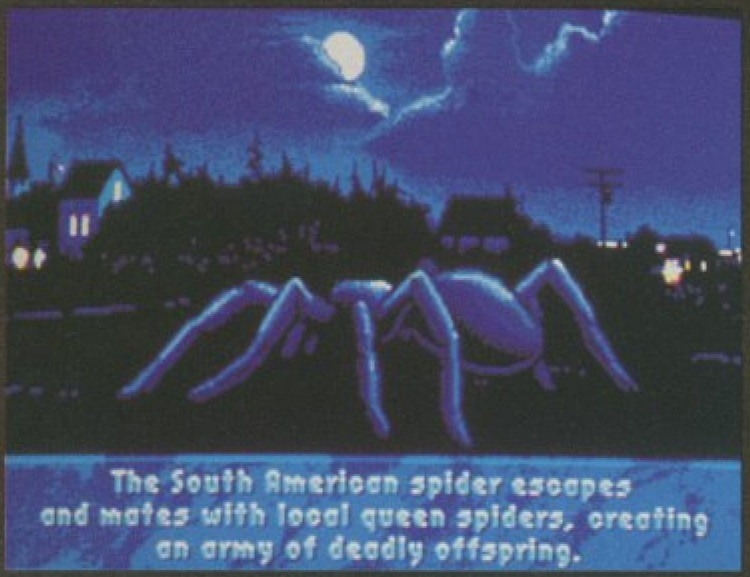
Bitcon KCS Powerboard PC Emulator
£279.95

A590 Hard Drive
£279.95

visit our shop in Nottingham - most of our customers come recommended by their friends!

Greenie-blaster supreme Jason "Kid" Holborn brings us the lowdown on the latest hot sox

GAMES news



ARACHNOPHOBIA - *Disney*

Ahh! I HATE spiders. If, like me, you tortured yourself by sitting through the recent Steven Speilberg blockbuster movie Arachnophobia then you'll probably not be too happy to hear that Disney Software have managed to pick up the rights to convert it to the Amiga.

As head of the McClintock Infestation Management Company your job is to rid Canaima of those vicious little eight-legged arachnoids before they manage to sink their little fangs into every towns-person within a 5-mile radius.

You must search through hundreds of buildings, wiping out any soldier spiders you find in your path. Do you feel up to the job? No? Well, you've got until the beginning of May to get prepared. Personally, I'm staying well away.

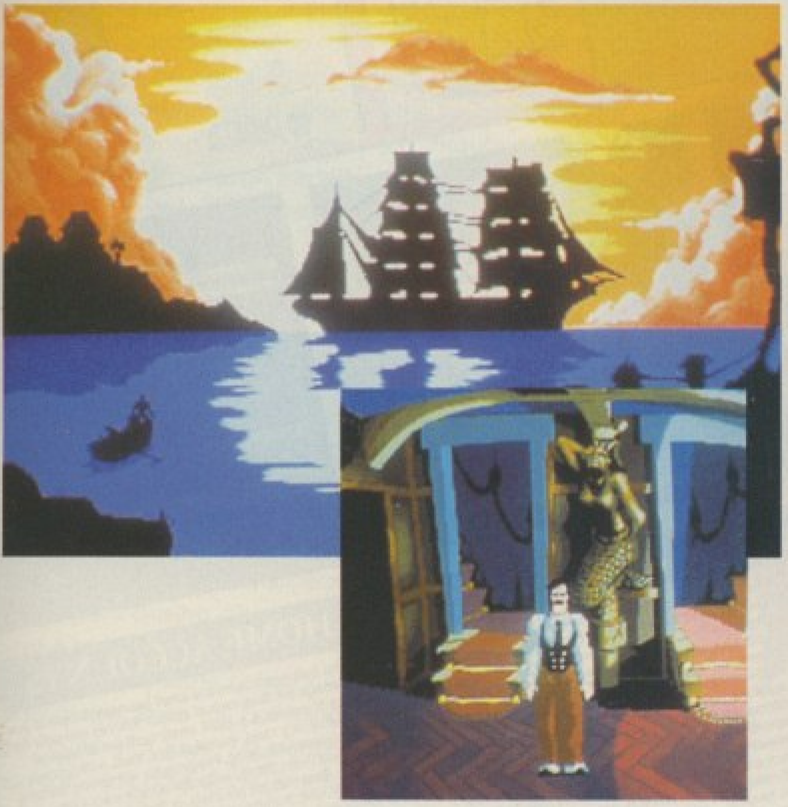
F15 STRIKE EAGLE II - *Microprose*

MicroProse have some good news for all you armchair Top Guns - they're hard at work on an Amiga version of their classic PC combat flight simulator, F15 Strike Eagle II.

According to MicroProse, the Amiga version features great enhancements over the original PC version which was launched way back in 1989. As a result, MicroProse reckon they've come up with a combat simulator that looks all set to give Mirrorsoft's Falcon a damned good run for its money.

Programmed by the team responsible for F19 Stealth Fighter, they've upgraded the 3D system used within that game to make F15 faster and more realistic.

It's out in May for a very reasonable £29.95 (which isn't bad when you consider that the real thing costs 20 million!).



CRUISE FOR A CORPSE - *US Gold*

From the successful team that brought you Future Wars and Operation Stealth comes Cruise For a Corpse, a murder investigation set onboard a yacht during the roaring 20s.

You've been invited onboard a luxury 3-masted yacht belonging to Greek Ship magnate Niklos Karaboudjan. But no sooner does the cruise begin when old Niklos kicks the bucket. It's now up to you to put on your silly Poirot moustache and go in search of the killer.

In true Agatha Christie style, you can piece together clues by interviewing anyone you encounter. You can have conversations with characters and even overhear dialogue between other characters.

Cruise for a Corpse will be available soon at a software stockist near you. Stay tuned for a review.

COUGAR FORCE - *Tomahawk*

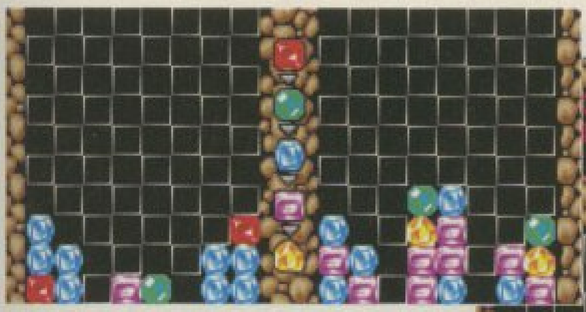
Some nasty international terrorist group have taken over an archipelago that is rich in minerals. Not wanting them to make a fast buck from their ill gotten gains, you've been sent on a mission to kick some terrorist ass.

What ensues is nothing short of gratuitous violence. Look out for it in early May for the usual price of £19.95.

SHADOW DANCER - *US Gold*

Based around the arcade classic, Shadow Dancer sets you in the role of a young Ninja who must battle his way through 15 stages of arcade violence.

To help our hero overcome the forces of evil, he's brought along his canine friend who also happens to be a pretty tough character. Usual US Gold price, £19.95.



Cute Japanese-style cartoon graphics are the order of the day in Gem'X

Gem'X is a puzzle game that will take minutes to learn, but literally months to master.

In true Tetris style, first impressions are not good – but once you've got the hang of it, you'll be hooked for months.

The screen is split into two halves – both contain an equal number of gems, but some are of a different colour. The idea is to change the colours of the stones on the left so that they match the stones on the right.

Changing the colours of gems is simple enough – just touch one and it changes – but it's important to note the order in which the gems change.

They change colour in a fixed order - Red is a virgin stone, but it can then drop down to green, blue, pink and finally gold. If you click on a gold gem, it disappears altogether, causing any stones above it to drop down to fill in the space left by the stone's absence.

Sounds simple so far, but things aren't quite that easy. For starters, when you click on a stone, it actually skips one colour (if it was red, it would skip green to become blue). Also, any stones that are directly above, below or to the side of the stone will be changed by one colour (red becomes green etc). Sapphire so good?

Things are complicated still further by the fact that you've only got a certain amount of time to figure out each screen. Most can be solved with little more than a couple of strategically placed mouse clicks, but some require lots of thought. Once you've completed a level, it's onto the next - and there are 26 of them in total!

Gem'X has a very cute Japanese-like presentation, which extends to both its graphics, music and even its sound effects. Your companion throughout the game is a sweet little Japanese girl with an even sweeter voice. When you make a right move she will congratulate you with a cheery comment, but if you mess things up she's been known to weep!

Gem'X may seem rather dull at first, but some great graphics and sound raise it above the usual run of the mill puzzle game. It's highly playable, looks great and even sounds great – what more could you possibly want?

Victoria H. Bailey

Graphics

If you thought puzzle games are dull, then think again - Gem'X is one of the best looking games you're likely to find.

Sound

A great tune and some equally great sampled sound effects come together to make Gem'X an audio extravaganza.

Gameplay

Puzzle games should be simple to get into, but difficult enough to keep you interested. Gem'X balances this equation perfectly.

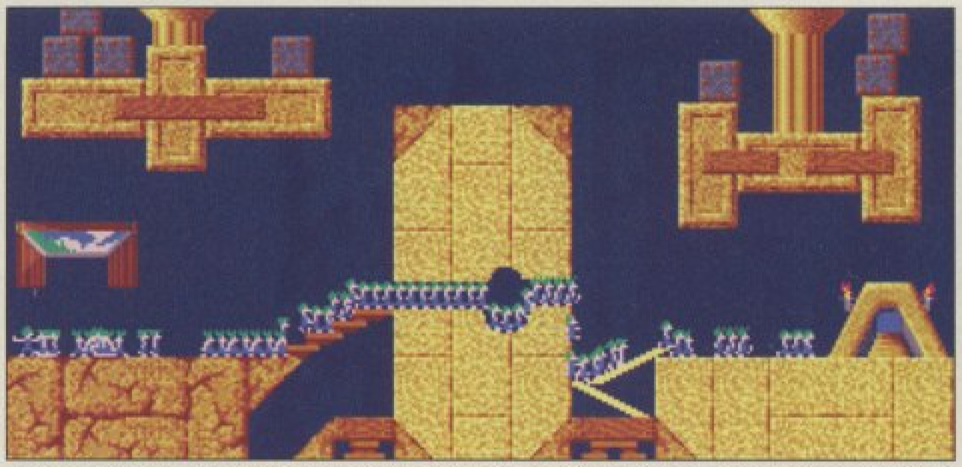
Stone me! It's a real gem

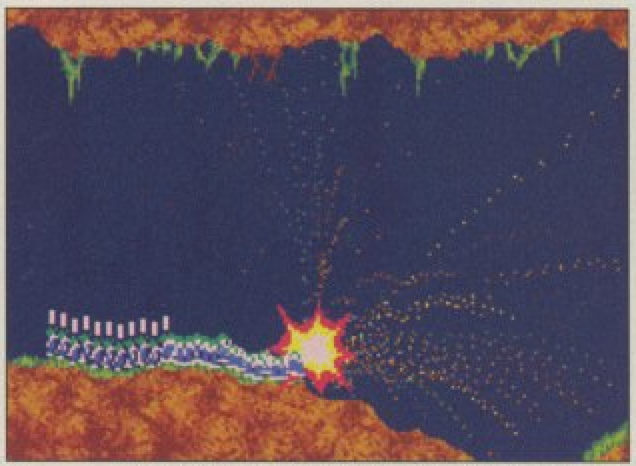
GEM'X

Publisher: **Digital Distribution** Price: **£24.99**

FINAL JUDGEMENT

80%





A fairly simple level this. Note the blocker in on the left – his job is to stop his buddies falling of the edge

If everything goes wrong, then press the "NUKE" button

Mother Nature has come up with some pretty strange ways of keeping population levels stable, but none are so strange as that of the Lemming, a small vole-like rodent which inhabits sub-arctic regions of Scandinavia and North America.

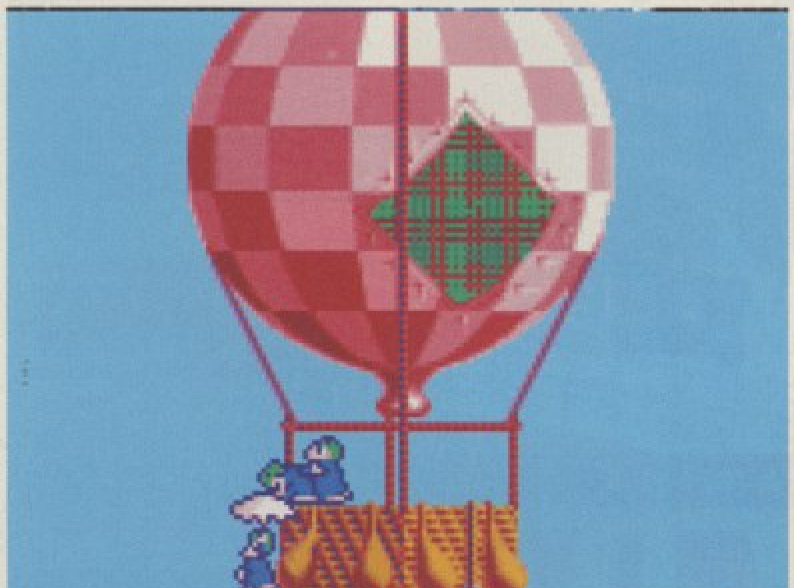
When the population level of Lemmings become too great, these cute little critters make the ultimate sacrifice for their race – they throw themselves off the nearest cliff!

If you feel like being a bit of a sadist, you can even lead the Lemmings to their death!

Taking a tip or two from nature, Psygnosis have adapted the obscure life story of the Lemming and turned it into a multi-screen epic which sees you trying to halt the mass genocide of a race of dungaree-clad, green-haired creatures. Your brief is simple – using your trusty mouse, you must guide the Lemmings to safety with a minimal number of fatalities en route.

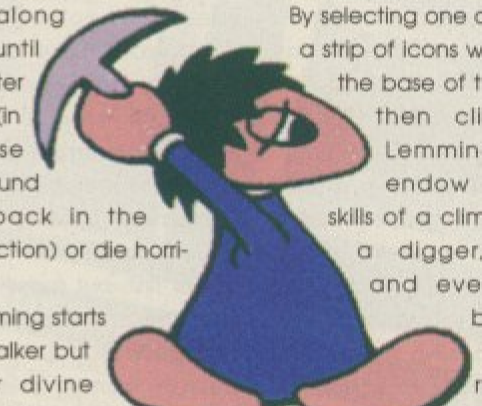
Each level starts with a trapdoor creaking open and a cry of 'Let's Go!' The Lemmings then pour forth to their eventual doom. Our heroes file along the ground until they encounter an obstacle (in which case they turn around and walk back in the opposite direction) or die horribly.

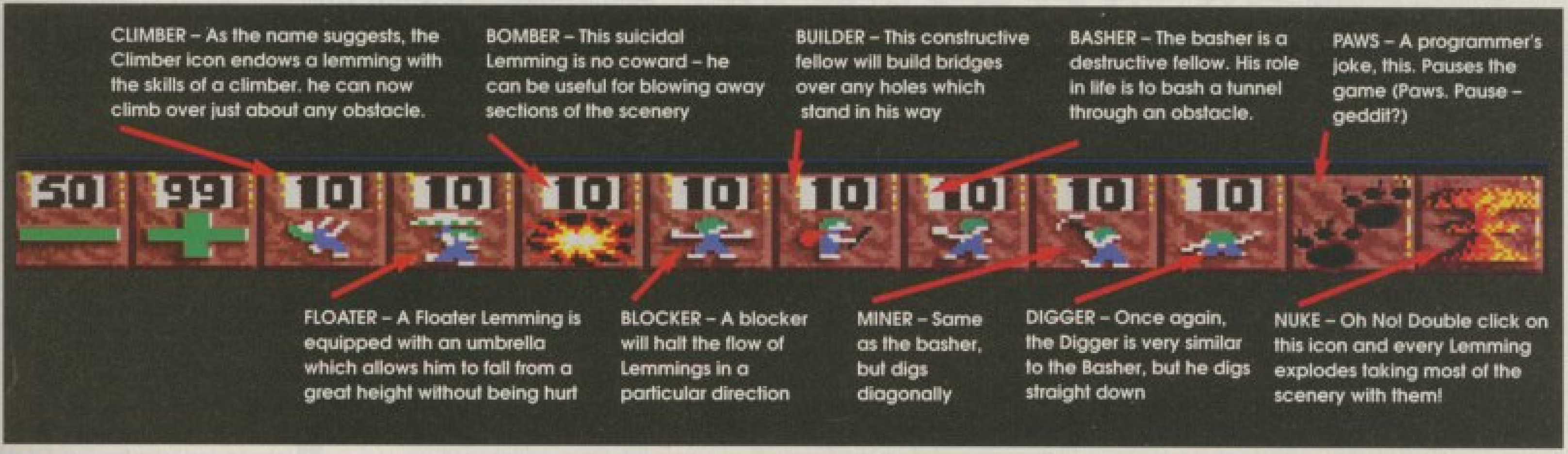
Every Lemming starts its life as a walker but – with your divine intervention – they can be assigned various skills which will allow them to collectively construct a safe passage to the exit of each level.



By selecting one of the skills from a strip of icons which run along the base of the screen and then clicking on a Lemming, you can endow it with the skills of a climber, a floater, a digger, a blocker and even a suicidal bomber.

Each level requires you to save a minimum number of Lemmings





Arrrgh! It's over the cliff we go!

LEMMINGS

Publisher: **Psygnosis** Price: **£24.95**

FINAL JUDGEMENT

97%

Graphics

Small but detailed, Lemmings' graphics are very cute and definitely up to the usual Psygnosis standards. In particular, animation is top notch.

Sound

The decidedly silly tunes that accompany each level are brilliantly matched to the overall humour of the game. Sound effects are also great, especially the sampled speech.

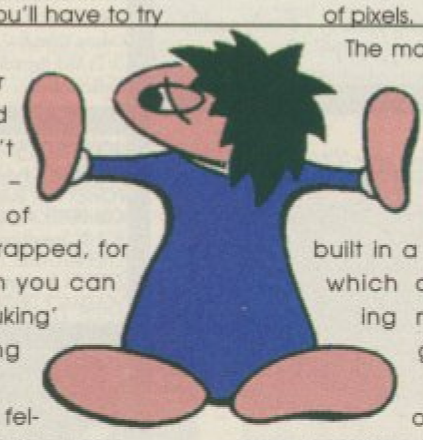
Gameplay

Totally original and totally addictive, you're unlikely to tire of Lemmings for a very long time. Each screen has its own password which can be entered to allow you to skip the levels you've already completed.

Diggers and builders are the key to success on this level

before you can proceed to the next. If you fall you'll have to try again.

If, on the other hand, you find that things aren't going too well – large numbers of Lemmings are trapped, for example – then you can end it all by 'nuking' every Lemming that is left alive.



The poor little fellows stop what they are doing, hold their heads in pain and then with a last desperate cry of 'Oh No!', they explode in a shower of pixels.

The majority of the time you'll be trying to save the Lemmings on your own, but Psygnosis have built in a 2 player option which adds an exciting new twist to the game.

This time, the object is to save more Lemmings than your opponent, by guiding them away from your opponent's exit point. This usually involves a large number of Lemming deaths, but it can be great fun.

Lemmings is absolutely brilliant. Psygnosis have managed to produce a game that is not only totally original, but also features the kind of addictive gameplay that will keep you coming back for more time and time again.

If you only ever intend buying one game for your Amiga, then it's got to be Lemmings. Put simply, Lemmings is an absolute Amiga classic.

Jason Holborn

Destruction can be constructive when you let a basher loose on this level

PHONE ANYTIME FOR FAST FRIENDLY SERVICE

FREE WITH EVERY AMIGA PURCHASED 16 DAY HOLIDAY ACCOMMODATION FOR TWO PEOPLE - CHOICE OF 250 HOTELS

AMAZING AMIGA SPECIALS

NO HIDDEN EXTRAS – THE PRICE YOU SEE IS WHAT YOU PAY

A500 AMIGA 512K RAM Computer - Built-in 1Mb Disk Drive, Mouse, A520 TV Modulator and Power Supply, Workbench 1.3, Extras and Tutorial Disks ONLY **£309.99**

A500 AMIGA 1 MB RAM Computer - Built-in 1Mb Disk Drive, Mouse, A520 TV Modulator and Power Supply, Workbench 1.3, Extras and Tutorial Disks. **Includes Commodore's own official 512K RAM Expansion Pack ONLY £324.99**

SCREEN GEMS SOFTWARE PACK

Back to the Future 2, Shadow of the Beast 2, Knight Breed and Days of Thunder, Deluxe Paint II Art Package. Plus FREE T Shirt **£49.99**

ASTRA GAMES PACK

Ten Top Amiga Game Titles Worth nearly £230.00.
DataStorm, Dungeon Quest, Grand Monster Slam, Powerplay, Microprose Soccer, RVF Honda, E-Motion, Tower of Babel, Kid Gloves, Shufflepack Cafe.
Special Price **£24.99**

ACCESSORIES PACK

Top Quality 40 Disk Holder, 10 Best Quality Bulk Disks with Labels, Quality Mouse Mat, Mouse Holder, Tailored Monogrammed Dust Cover.
Special Price **£19.99**

AMIGA CLASS OF 90'S EDUCATION PACK

AMIGA A500 with 1 MB Upgrade and Educational Software **£529.99**

AMIGA CLASS OF 90'S FIRST STEPS PACK

AMIGA A500 with 1 MB Upgrade and Educational Software **£529.99**

ALL NEW AMIGA 1500

For Home, Business, Education, Design & Leisure Fitted with 1Mb RAM, Twin Disk Drives and Separate Keyboard and CPU case as A2000.
SOFTWARE pack includes
THE WORKS - PLATINUM EDITION
Spreadsheet, Database, Word Processor and Comms Package DeLuxe Paint III Art Package and 1 Mb Strategy Games:
Their Finest Hour, Battle Chess, Sim City plus Terrain Editor, Populous plus Promised Lands ONLY **£649.99**

COMMODORE A590 HARD DRIVE £279.99

MONITORS

COMMODORE 1084S Stereo New Model incl Leads £249.99
PHILIPS CM8833/II New Model High Resolution Stereo incl Leads £239.99

GENLOCK

RENDALE 8802 Genlock £155.99

DUST COVERS

TOP QUALITY AMIGA COLOUR DUST COVERS TAILORED, MONOGRAMMED AND WITH BOUND EDGES. PROTECT YOUR INVESTMENT

AMIGA Keyboard Dust Cover	£4.99
CITIZEN 120D Printer Dust Cover	£4.99
CITIZEN Swift 9/24-124D	£4.99
AMIGA Monitor MKI	£4.99
AMIGA Monitor MKII	£4.99
AMIGA 1500 All in one Cover	£6.99
STAR LC10 Printer	£4.99
STAR LC200 Printer	£4.99
STAR LC24/200 Printer	£4.99
PANASONIC KXP1124 Printer	£4.99

PRINTERS

We are CITIZEN SUPER DEALERS and Authorised to Offer their FULL 2 YEAR GUARANTEE ON ALL CITIZEN PRINTERS

CITIZEN 120D + Serial or Parallel Interface Please State which when ordering	£129.99
CITIZEN 124D Lowest Cost 24 Pin Letter Quality Printer	£209.99
CITIZEN SWIFT 9 MONO as above except Mono until Colour Kit Fitted	£189.99
CITIZEN SWIFT 9 COLOUR High Spec.9 Pin with 4 Fonts and 240 x 240 dpi Colour Graphics	£219.99
CITIZEN SWIFT 24 MONO as above except Mono until Colour Kit Fitted	£279.99
CITIZEN SWIFT 24 COLOUR High Spec 24 Pin for Perfect Quality Text and 360x360 dpi Colour Graphics.	£309.99
SWIFT 9/24 COLOUR KIT easily fitted converts SWIFT 9/24 Mono printers into Colour Versions	£34.99
PANASONIC KXP1124 24 Pin	£249.99
SEIKOSHA SP-2000 9 Pin NLQ RRP £228.85	£149.99
STAR LC 10 MONO	£159.99
STAR LC-200 COLOUR.	£219.99
STAR LC24/200 MONO	£259.99
STAR LC24/200 COLOUR.	£299.99

All Printers are Supplied with Ribbon, Connecting Cable and Plug and Ready to Go to Work.

Please Ring for Prices of Printer Ribbons - Full Range Stocked.

CASPELL RE-INK Ribbon treatment £12.95

MIDI EQUIPMENT

DATEL Midi Master Interface £29.99
Midi Leads ..... Per Pair £5.99

CUMANA CAX354 DISK DRIVE £58.99

The Best Amiga Drive There Is.

RAM EXPANSIONS

512K RAM Expansion, Clock and Switch (Total 1Mb Memory Capacity) **£29.99**
Very easy to fit and does not invalidate warranty.
Made by CORTEX – 3 Year Guarantee.
Can be fitted and tested FREE of charge if purchased at same time as Computer.

EXTRA SPECIAL DEAL

BUY BOTH FOR £85.99

KCS PC POWER BOARD

Run Professional MS DOS Software on the Amiga A500.
Easy to Fit in Trapdoor underneath Amiga.
No Loss of Guarantee
Adds 1Mb Extra Memory to your Amiga
Includes £130 worth of Software
Supports A590 Hard Disk **£299.00**

EXCLUSIVE!

THE AMIGA TUTOR VIDEO

For new and not so new Amiga Users - shows in clear graphic detail all you need to know to become proficient in using the Amiga

SUBJECTS COVERED INCLUDE:

- *Setting-up Monitors - Mouse Expansion*
- *Workbench Customisation - Copying - Renaming - Formatting*
- *Notepad - Menus - Fonts Saving - Printing*
- *Icons - Clock - Sizing - Moving - Scrolling Windows*
- *CLI Directory Structure - Start-up Sequence - Multi-Tasking*
- *Printer Set-up - Preferences*
- *Virus Protection*

For the cost of a game you will learn techniques that will entertain you for years to come. Make sure you get the best from your expensive investment

£19.99 *inc POST & PACKING*

Features: Excellent . . . a great help . . . sensibly it teaches you about the most practical areas – the ones you will need. Range of topics covered over an hour and a half is wide and, above all, practical . . . Put together by people who know a fair amount about the Amiga . . . AMIGA FORMAT – January 1991

Excellent . . . simple answer to many tricky problems . . . well worth the asking price . . . if only such a thing was available in my formative years . . .AMIGA COMPUTING – February 1991

AMIGA BOOK SPECIALS

Advanced Amiga Basic	£16.49
3D Graphics Programming in Basic	£16.99
Amiga Assembly Language Program	£11.49
Amiga Basic - Inside and Out	£17.99
Amiga C For Beginners	£14.49
Amiga C For Advanced Programmers	£27.99
Amiga Disk Drives-Inside and Out	£24.99
Amiga DOS - A Dab Hand Guide	£13.99
Amiga DOS Quick Reference Guide	£ 8.99
Amiga for Beginners.	£11.99
Amiga Graphics Inside & Out	£25.99
Amiga Hardware Reference Manual	£20.99
Amiga Machine Language	£12.49
Amiga ROM Kernel Libraries & Devs	£27.99
Amiga System Programmers Guide	£28.99
Amiga Advanced Systems Prog. Guide	£25.49
Amiga More Tricks and Tips	£16.49
Computes First Book of the Amiga	£13.99
Computes Amiga Programmers Guide	£15.99
Elementary Amiga Basic	£12.49
Inside Amiga Graphics	£14.49
Kids and the Amiga-Kids 8 to 80	£13.49
Programmers Guide to the Amiga	£22.49
Using DeLuxe Paint 2nd Edition	£17.49
Amiga Desktop Video Guide	£15.99
Amiga Desktop Video Workbook	£29.99
Amiga Printers Inside & Out + Disk	£24.99
Making Music on the Amiga + Disk	£24.99

SERIOUS SOFTWARE

Kind Words V2.0	£ 29.99
Scribble Platinum	£ 35.99
Pen Pal	£ 89.99
Protext V4.2	£ 64.99
Protext V5.0	£119.95
Advantage	£ 69.99
Mavis Beacon Teaches Typing	£ 18.49
Gold Disk Office	£ 99.99
Home Accounts	£ 19.99
Digita System 3	£ 31.99
Page Setter V2	£ 49.95
Disney Animation Studio	£ 72.99
Digi-View Gold	£ 112.99
The Works – Word Processor, Spreadsheet, Database etc	£75.99
GB Route	£37.99
Home Office Kit	£ 94.99
HiSoft Basic	£ 55.99
HiSoft Basic Extend	£ 14.95
AMOS Game Creator Plus FREE Disk	£ 37.99
DeLuxe Paint III	£ 59.99
DeLuxe Video III	£ 59.99
Dr T's Midi Recording Studio	£ 38.99
Perfect Sound	£ 45.99

ACCESSORIES

Quality Soft Mouse Mat	£4.99
Mouse Bracket (to Hold Mouse)	£1.99
3.5" Disk Drive Head Clean. Kits	£3.99

PREMIER CONTROL CENTRE – Sits over Amiga as Monitor Stand & Second Disk Drive Holder. Colour Matched to Amiga and supplied with extension Plugs and Sockets to bring Ports forward to front side. £45.99

TWIN Joystick/Mouse Extension Lead	£5.99
JOYSTICK/Mouse "Y" Lead	£6.99
JOYSTICK/MOUSE Switch Box	£14.99
3 METRE JOYSTICK Extension Leads	£5.99
AERIAL SWITCHING BOXES fit in TV lead to eliminate constant disconnection and wear on TV	£3.99
SURGE Protector Plugs	£11.99
PRINTER Cables	£7.99
STEREO AMPLIFIER & SPEAKER SYSTEM for Great Sound from your Amiga	£22.95
Optional Mains Power Supply	£5.99

DISKS - DISKS - DISKS - DISKS

FULLY GUARANTEED DSDD BULK DISKS 100% Certified - either SONY, TDK or MITSUBISHI UNBRANDED - ALL INDIVIDUALLY WRAPPED & WITH LABELS

DO NOT CONFUSE WITH INFERIOR UNCERTIFIED

Pack of 10	£5.49	Box of 50	£19.99
Pack of 20	£9.49	Box of 100	£37.99

Pack of 20 in Our Top Quality Lockable 40 Disk Holder	£12.99
10 Flip Top Disk Holder	99p
40 Disk Holder Lockable Top Quality.	£ 3.99
80 Disk Holder Lockable Top Quality.	£ 5.99
POSSO BOX – Stackable Drawer Type Box – Holds 150 Disks	£16.99

DISK LABELS
Four Mixed Assorted Colours – 60 for £1.00

JOYSTICKS

QUICKSHOT Python Turbo III.	£9.49
POWER PLAY BLACK	£9.99
COMPETITION PRO 5000	£11.99
KONIX Speedking Auto	£12.49
CHEETAH Mach 1	£10.99
ZIPSTICK Superpro Auto	£11.99
VOLTMACE DELTA 3A Analogue	£14.95

These prices are Mail Order only Refer to it if telephoning your order or bring this advert with you if shopping personally

SOFTWARE EDUCATIONAL & CHILDRENS

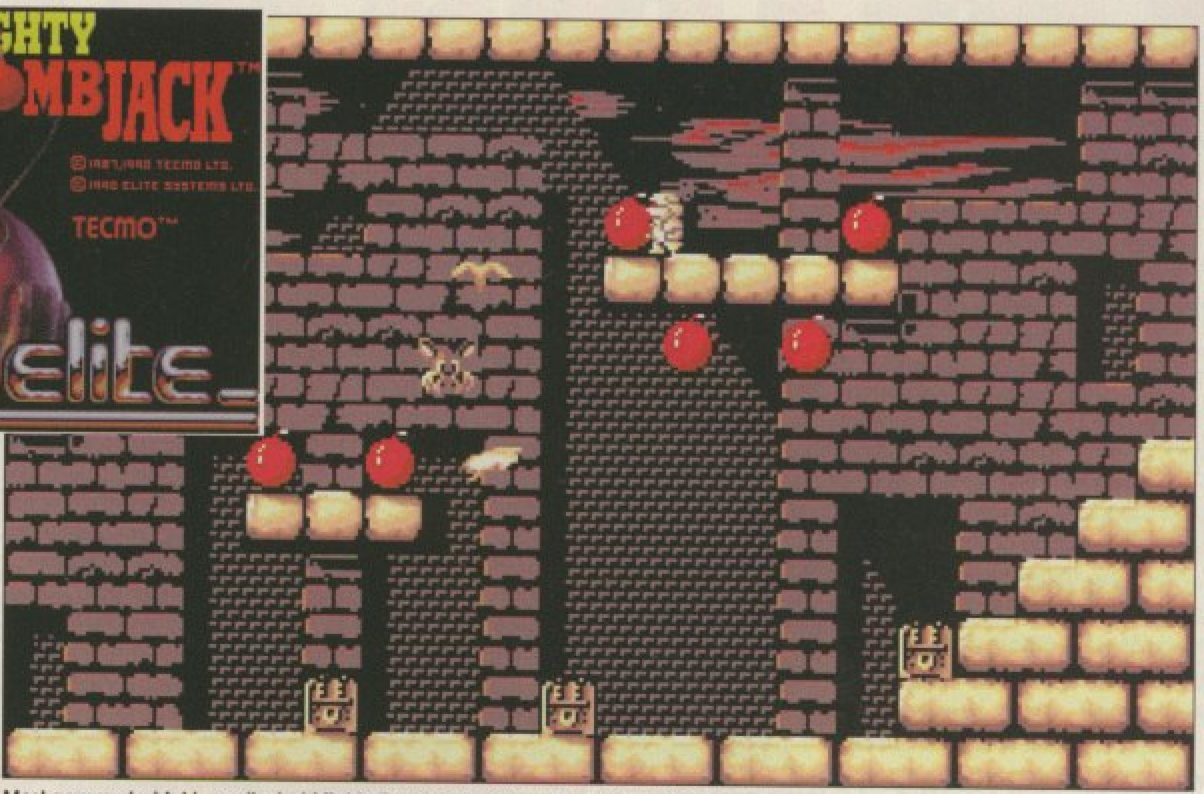
Fun School 3 - Under 5	£16.49
Fun School 3 - 5 - 7 Years	£16.49
Fun School 3 - 7 and Over	£16.49
Junior Typist.	£ 12.99
Micro English (GCSE)	£17.99
Micro Maths (GCSE)	£17.99
Micro French (GCSE)	£17.99
Mega Maths (GCSE)	£17.99
Primary Maths.	£ 17.99
Reading & Writing 3-8 Years, LCL	£17.99
Things to do with Numbers	£15.99
Things to do with Words	£15.99
AB Zoo	£3.99
Spell Book 4-9	£ 13.99
Lets Spell at Home	£14.99
Lets Spell at the Shops	£14.99
Lets Spell Out & About	£14.99
Puzzle Book Vol 1	£13.99
Mavis Beacon Teaches Typing	£18.49
Answer Back Junior	£13.99
Answer Back Senior	£13.99
Kosmos - The German Master	£17.49
Kosmos - The Spanish Tutor	£17.49
Kosmos - The Italian Tutor	£17.49
Fact File 500 - General Science	£8.99
Fact File 500 - 20th Cent.History	£8.99
Trivial Pursuit	£ 14.99

AUDITION COMPUTER SERVICES

9a, St. Peters Street, Stamford, Lincs PE9 2PQ
Send cheque or phone credit card details for same day despatch or come and browse in our shop. Minimum order £15.00
All prices include VAT and Delivery
Telephone 0780 55888 Shop Hours – 0780 720531 out of hours

Access

VISA

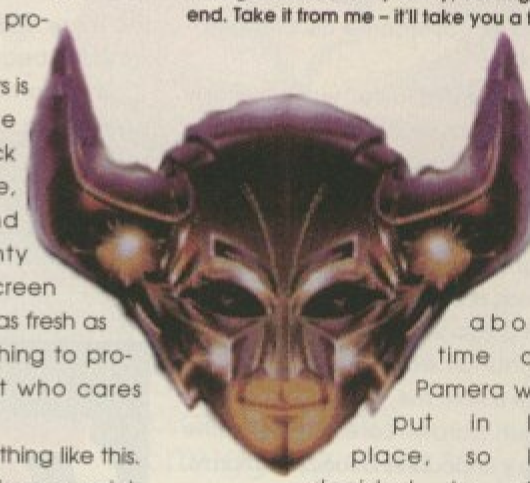


Most games start fairly easily, but Mighty Bombjack drops you right in at the deep end. Take it from me – it'll take you a fair old time just to get off this screen.

Back in the days when the Amiga was a mere twinkle in Commodore's eye, Elite released a conversion of a fairly run of the mill arcade game called Bombjack.

No one expected it to do particularly well, but we were all proved wrong when it positively soared up through the charts, earning Elite a fair few pounds in the process.

Well, the good news is that Elite have wheeled ol' Bombjack out of the deep freeze, set him on thaw and the result is Mighty Bombjack, a multi-screen platform affair that is as fresh as ever. Ok, it does nothing to promote originality, but who cares anyway!



The plot goes something like this. Once upon a time (I love an original intro) there was a goodly king called Pamera who was a just sort of fellow. He had managed to maintain peace within his kingdom for many years, so it was inevitable that someone would eventually try and muck it all up. That someone was Beelzebut, a wicked demon if ever there was one.

Beelzebut decided that it was about time old Pamera was put in his place, so he decided to plot against the king to bring about his downfall.

Upon hearing of his wicked plans, the brothers Mighty set forth to conquer old Beelzebut. Unfortunately, things didn't go too well. Indeed, only one brother survived the confrontation – Jack. Licking his wounds, he vowed to return to defeat Beelzebut. Eventually he does – but he'll need your guidance to do it.

You must guide Jack through 16 levels of platform action, collecting bombs and bonuses as you go, whilst avoiding the baddies that have been sent out to get you.

Ok, we've seen it all before, but Mighty Bombjack still manages to deliver the same addictive qualities that made the original such a hit.

Peter Bircher

Graphics

Little has changed since the original Bombjack was released all those years ago. The graphics are still tiny and the background's rather dull, but they still work well.

Sound

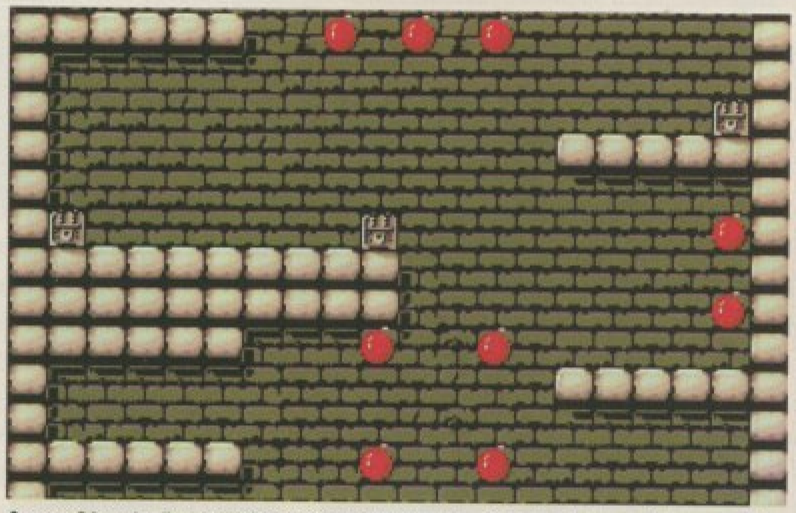
Apart from a fairly decent theme tune, Mighty Bombjack possesses little in the way of sound effects. There are the occasional spot effects, but even these are far from awe-inspiring.

Gameplay

There's nothing like a damned good platform game now and then, and Mighty Bombjack fits the bill nicely thank you. Just like its predecessor, it's very addictive - once you pick up your joystick, you won't want to put it down again.

FINAL JUDGEMENT

80%



Screen 2 is actually somewhat easier than screen 1 – just drop down as fast as possible

All on your Jack Jones against a wicked demon

MIGHTY BOMBJACK

Publisher: **Elite** Price: **£24.99**

What a load of BALLS! No, I'm not referring to the game itself, but its hero – yet another flippin' ball! I ask you, why are game programmers so preoccupied with balls?

Nope, don't answer that . . .

Pop Up is a fun little cross between Bombjack and Audiogenic's Helter Skelter. And, like those great games, it's guaranteed to literally BOWL you over!

In this wildly addictive arcade puzzler, you must guide a little bouncing ball through screen after screen of arcade action.

You'll be taken through five time zones, starting at the very beginning of time itself and then on through to the present day and the future.

Each screen consists of a number of platforms which you must bounce around, collecting artifacts as you go.

These increase your score, but the object you're really after is the exit key – once collected, an exit will appear which will allow you to progress to the next screen. As ever, there are obstacles to dodge and traps to avoid, but our little rubber friend is not without help. No sireee, for tools are dotted around the screen which will help him overcome his little problems.

These include water drops which douse burning platforms, Keys which allow passage through certain walls and hammers that do the same job as the keys, but in a slightly more direct way (who needs a skeleton key when you've got a 25lb sledgehammer!)

Sounds easy doesn't it? But, take it from me, things get harder... much harder. Later in the game you'll encounter bouncy platforms, sticky platforms, angled platforms - in fact, just about any type of platform you can think of, all of which are designed exclusively to hinder your progress.

The more you play this game, the more you will become determined to beat it.

The controls are great and, apart from a deathly dull menu screen, Pop Up is an addictive little number. Definitely one for your software collection.

David Johnson

Where's the bloomin' exit? Collect the key and it will appear

Guaranteed to bowl you over!

POP UP

Publisher: **Infogrames** Price: **£19.99**

You're in the prehistoric age and some particularly nasty looking prehistoric goldfish appear... arggghhh!

This screen could prove to be hot stuff if you don't avoid those fireballs!

FINAL JUDGEMENT

75%

Graphics

Clean, well defined and colourful, but not too adventurous. Nevertheless, Pop Up's graphics work well.

Sound

Boing. Boing. Boing. What else do you expect from a bouncy ball game? Apart from a few appropriate spot effects, there's very little worth mentioning – there isn't even a tune!

Gameplay

Great. The controls are easy to master and work well. The puzzles are enough to make you bawl but you are sure to have a ball.

MEGATRAVELLER 1™

THE ZHODANI CONSPIRACY

" Heralded The American Computer Role-Playing Game of the Year!"

TAKES SCIENCE FICTION ROLE-PLAYING LIGHT YEARS FORWARD!

AVAILABLE ON: ATARI ST • COMMODORE AMIGA IBM PC & COMPATIBLES

The four legendary Frontier Wars have passed,each started by the Zhodani and each ending in a shaky peace....

.....Now with the help of corrupt Imperium officials the Zhodani and the Outward Coalition are planning a fifth. Smuggling arms to traitorous groups within Imperium borders the Zhodani are planning to strike from within.

BASED ON MEGATRAVELLER BY GAME DESIGNERS' WORKSHOP, THE WORLD'S MOST POPULAR SCIENCE FICTION GAMING SYSTEM

VERSATILITY

The most sophisticated character generation system ever devised: five military classes, more than 70 talents and abilities. Allows player to control character development through 5 services: Army, Navy, Marines, Merchants and Scouts.

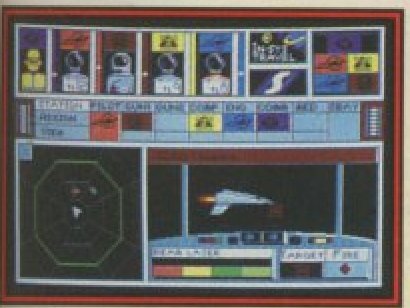
IMAGINATION

Flexible gaming system supports any playing strategy and allows multiple solutions to problems and obstacles.

FIREPOWER

Realistic, combat sequences let you control each of your characters individually, while still giving general combat orders to the other members of your party. Utilise more than 30 weapons and skills in this advanced combat system.

72 varied skills to learn and use including medical, piloting, communications, laser weapons, bribery, demolitions and handgun.



COURAGE

28 planets and satellites to explore in 8 systems filled with exciting puzzles, dangerous subplots and interesting characters to encounter.

"MegaTraveller 1, a game that truly warrants the highest level of praise, the attention to detail makes it exceptional!"

RESOURCEFULNESS

Saving the universe costs money: a detailed bartering system lets players earn Imperial credits through interplanetary trading, with 30 types of cargo.

SCREEN SHOTS TAKEN FROM IBM PC VERSION

Supports Ad Lib Music Card and Real Sound for state-of-the-art musical score, digitized speech and realistic sound effects.

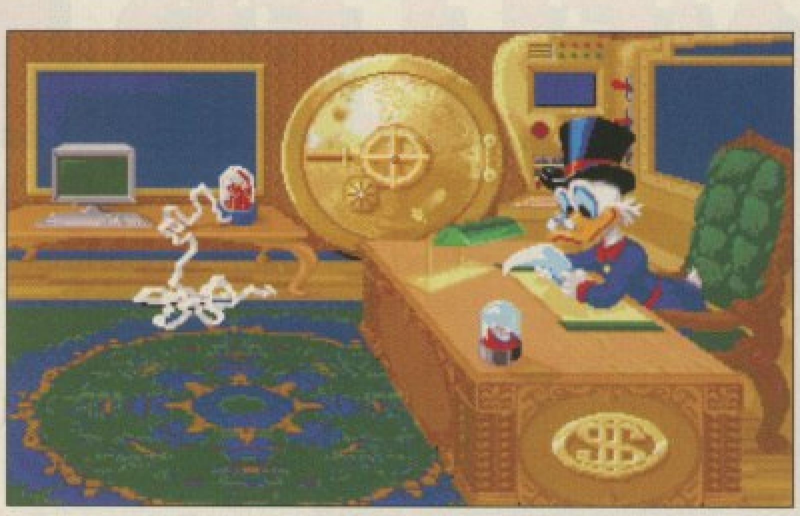
STRATEGY

"MegaTraveller 1 is one of the finest role-playing computer games in at least the last three or four years."

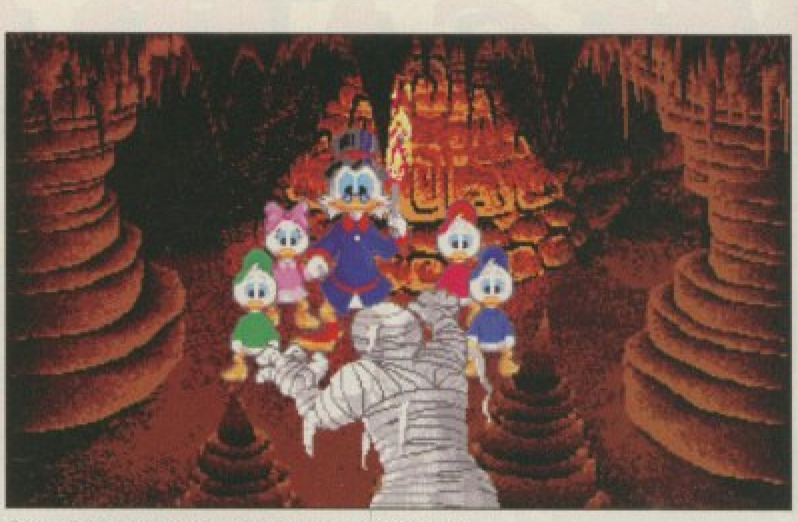
"MegaTraveller 1 is one of the best science fiction role-playing games ever for the computer."

QUOTES TAKEN FROM DRAGON MAGAZINE U.S. & QUEST BUSTERS MAGAZINE U.S.

EMPIRE SOFTWARE, 4 THE STANNETTS, LAINDON NORTH TRADE CENTRE, BASILDON, ESSEX SS15 6DJ. TEL: 0268 541212



Old McDuck's office – the nerve centre of the McDuck empire



Ooops!! think we took a wrong turning back there...

Feathers fly as duck battles against duck! But it's quacking good fun

DUCK TALES

Publisher: **Disney Software** Price: **£24.99**

They say money doesn't buy happiness, but perhaps someone should tell that to Scrooge McDuck and his cousin, Flintheart Glomgold. They're the stars of a quacking (sorry) new game from those masters of animation, Disney.

To old Scrooge and his equally tight cousin Flintheart, money is everything. Put simply, they're the kind of characters who would sell their grandmothers if they thought an easy profit could be made.

And to prove how financially astute they really are, a challenge has been set – whoever collects the most money in under 30 days wins the coveted title of 'Duck Of The Year' in that illustrious publication, Dime Magazine.

So the scene is set. Duck against Duck in a battle where everything goes (for the right price, that is). You play the part of old Scrooge McDuck – a bad egg on the outside, but a nice old chap on the inside.

Relaxing the McDuck way

With the aid of his nephews Huey, Dewey and Louie, old McDuck must grab his Indiana Jones hat and whip and go in search of treasure. He'll find himself lost in a network of caves, swinging from vines in the Amazon jungle and climbing mountains in search of treasure.

Each of these little excursions takes the form of a separate sub game which has to be completed if McDuck is to add to his already bulging coffers.

Unfortunately, these are continuously repeated throughout the game, so the attraction soon pales. Things are made even worse by the number of disk accesses that are necessary to play the game - you can often spend more time waiting for a section to load than actually playing it!

Although Duck Tales is undoubtedly aimed at a fairly young audience, it has the makings of a great game. Unfortunately, it's just far too repetitive to be worth more than a passing glance. It's a shame that the programmers didn't spend as much time on the gameplay as they did on the graphics! If they had, then Duck Tales would have been a stunning piece of software.

Bill Richards

Graphics

You'd be right to expect something pretty special from Disney, and this latest release certainly isn't going to disappoint. All the graphics are big and well defined, making them almost indistinguishable from their big screen counterparts. Animation is a little bit on the slow side.

Sound

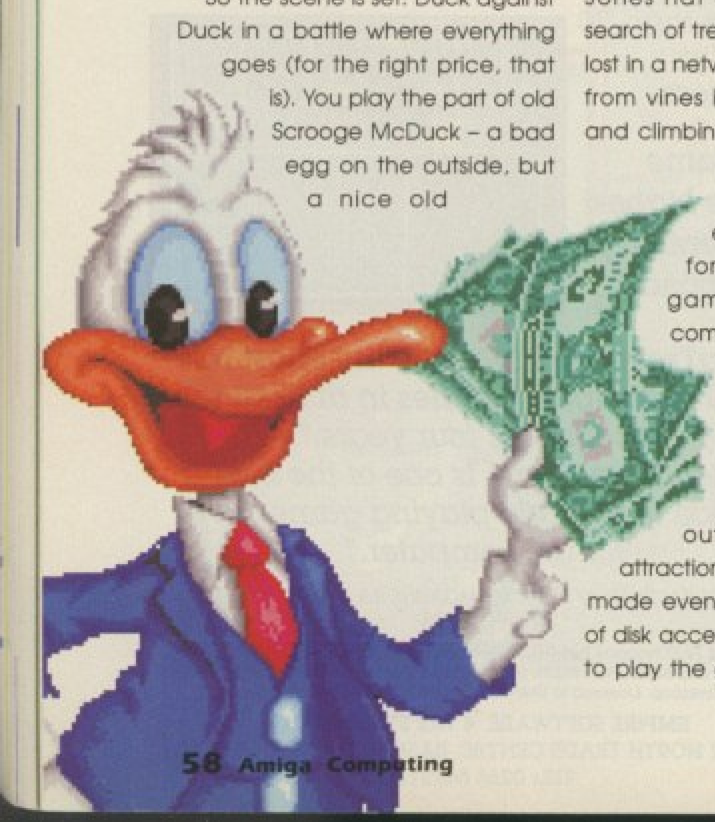
Some pretty decent tunes accompany play, but what really makes the game shine are the numerous speech samples and effects that really give it that fun Disney feel.

Gameplay

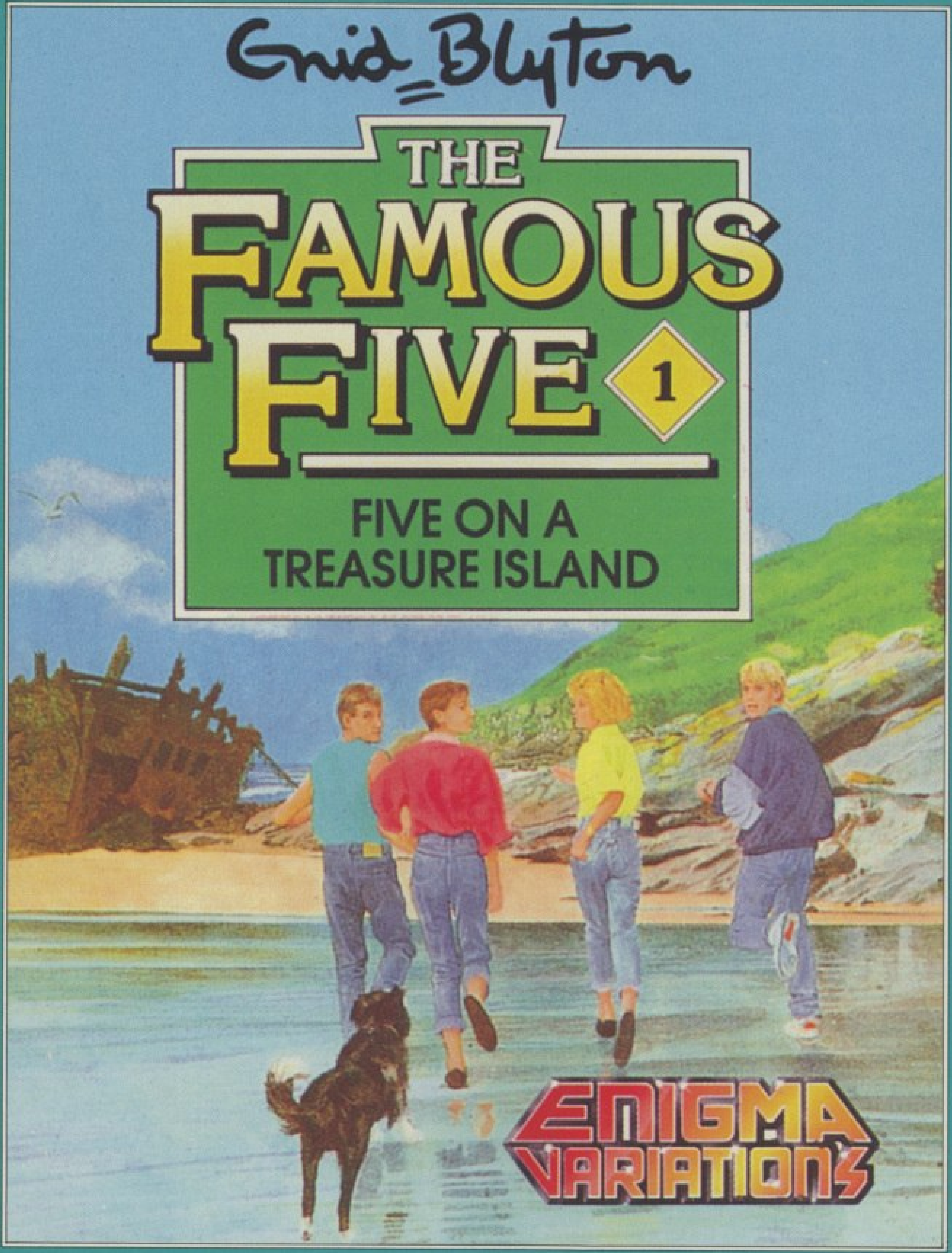
DuckTales reminds me of some of the very early Cinemaware games – they had great graphics, superb sound, but gameplay was practically nonexistent. Unfortunately, Duck Tales shares this problem. Sure, it looks good, but the gameplay is simply too repetitive to make it the kind of game you'll come back to.

FINAL JUDGEMENT

7/5



RELIVE THE GREATEST ADVENTURE OF YOUR CHILDHOOD!



Enid Blyton's much loved characters come alive in this faithful version of the best selling book. Using the "Worldscape" adventure system you can play any of the children as they solve the mystery of the Treasure Island. Featuring a powerful text parser and many graphical locations, this is a game for the young and the young-at-heart

AVAILABLE SOON FOR

AMIGA, ATARI ST, C64, AMSTRAD CPC (+), SPECTRUM AND SAM COUPÉ

ENIGMA VARIATIONS LTD., 13 NORTH PARK ROAD, HARROGATE HG1 5PD TEL: 0423 501595 FAX: 0423 500291

Stand by all you would be Captain Kirks, there's Klingons on the starboard bow. Do not fret, it isn't another Star Trek game – which is good because 'I dunna think I could take any more captain.'

No. This is Star Control – the continuing struggle against good and evil in a futuristic battle where all is at stake and only you with your army of various space vehicles can save the known universe from a cruel, evil empire. Wait a minute . . . haven't I heard that story somewhere before?

Never mind. Strap your plasma bolt shooter to your waist, put your genuine imitation leather hover boots on and tilt your space helmets 'cos this is gonna be one helluva duel.

Star Control is the latest offering

Fancy yourself as a Saviour of the Universe...?

STAR CONTROL

Publisher: **Accolade** Price: **£24.99**

Choose your ship and then it's off to battle!

from those old reliable Accolade boys and it's good . . . very good. It's also big so it's for one meg Amigas only I'm afraid.

It's set in the distant future with two legions of seven space ships locked in deadly combat. The Alliance – fighters for truth, justice and liberty for all – and the evil Hierarchy, the scourge of the universe. Boo . . . Hiss . . .

Gameplay-wise, Star Control reminds me of an old arcade game I used to play in my wild and reckless youth, called Space Battle. In that game, two space ships flew around the screen blasting each other and avoiding a planet slap bang in the centre. Sounds pretty simple I know, but Accolade's offering goes a lot further than this archaic game – there's a certain amount of strategy in there too.

The game offers a few different scenarios just to stop it getting boring. For starters, you can practice at a one-to-one level with any of the ships on offer. This is highly recommended as each ship has different characteristics including speed, weaponry and shields plus – as an added bonus – each of the

Graphics

Although the graphics are generally small, they zip around the screen without a judder in sight. On the whole, presentation is good.

Sound

Nothing worth writing home about, but it's functional enough. However, each ship has its own victory tune, which is quite a nice touch.

Gameplay

Great. The controls are well laid out and easy to master. The gameplay is far from original, but who cares when it's so addictive?

would be
, there's
starboard
nother Star
is good
k I could

– the con-
good and
where all is
with your
e vehicles
verse from
t a minute
that story

ur plasma
t, put your
her hover
pace hel-
e one hel-

est offering

Accolade
very good.
one meg

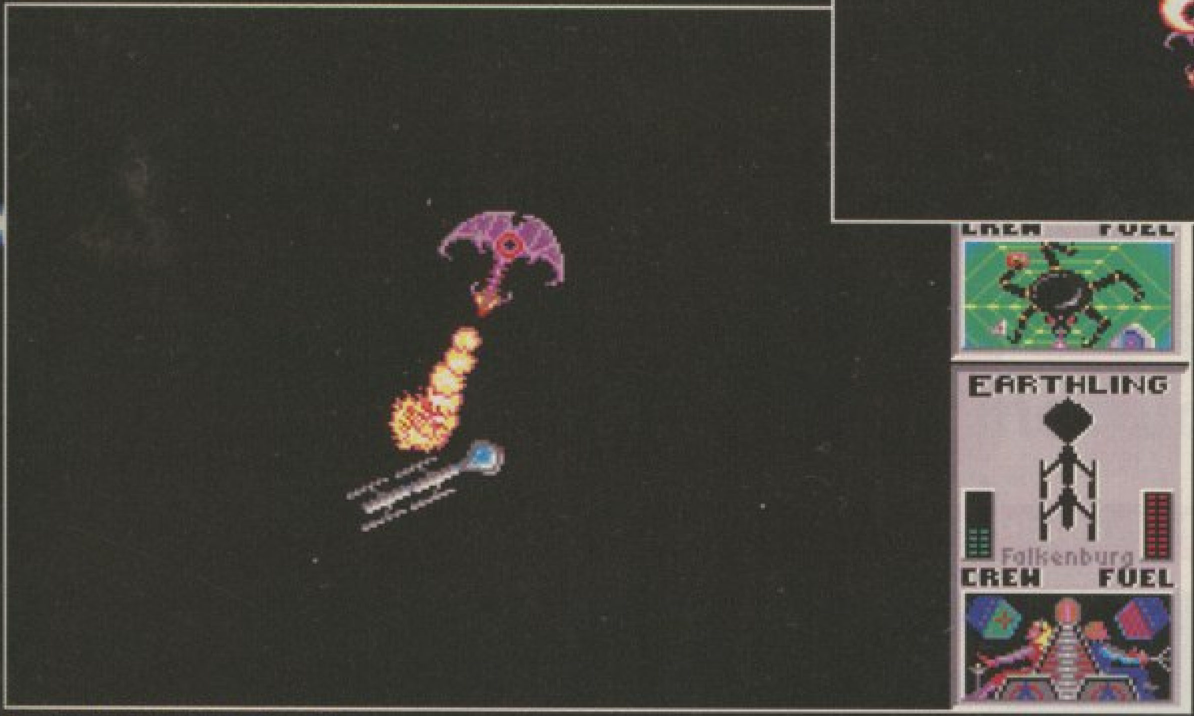
future with
pace ships
mbat. The
uth, justice
nd the evil
of the uni-

ar Control
d arcade
n my wild
lled Space
wo space
reen blast-
voiding a
he centre.
know, but
es a lot fur-
c game –
t of strate-

w different
getting bor-
in practice
with any of
s is highly
h ship has
s including
hields plus
each of the

The two opposing ships are out of range of direct fire, but Player 1 send s out fighters (the red blobs!) to intercept player 2.

At last, the two ships meet in a bloody battle which will see only one survivor. Player 2 scores a direct hit, but the batte's not over yet



Cannons a blazin', player 1 returns fire

ships has a special move or trick up its sleeve.

Once you think that you'll be more than just laser fodder for some slime dribbling alien, then it's time to move on to Meele. This option cuts out all that technical strategy stuff (that comes later) and puts you head to head with your opposing fleet as you fight to the death across a space field.

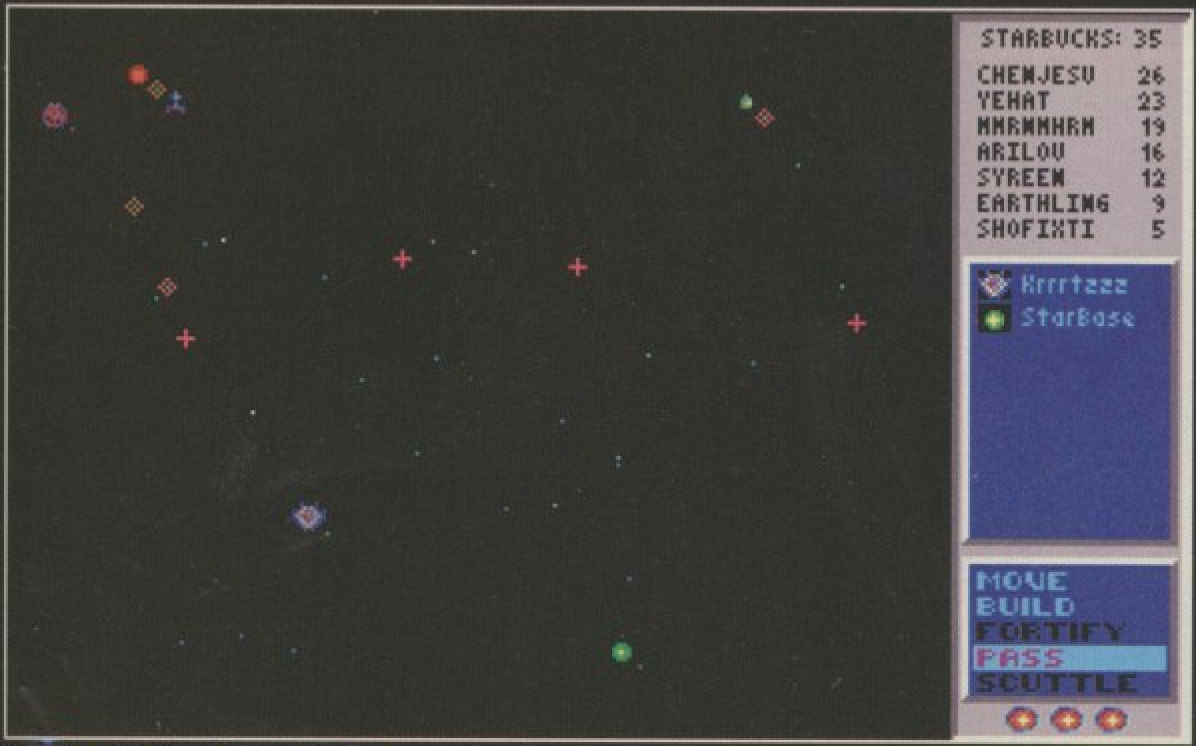
Oh, and be careful not to crash into the planets which have a gravitational pull – this could leave you a sitting duck.

If the tactical side of your nature is lusting for more, you can move on to the full game options. There are nine different scenarios in all, and even an option to create your own, but they all work around the same principle.

A moving star map with you at the bottom and your opponent at the top is laid out and each of the armies' ships move from planet to planet, colonising and fortifying them as they go. Movement is limited to the planets immediately surrounding the one you are on and not all planets lead where you think. It's a bit like trying to read a British Rail timetable at first, but you'll soon get the hang of it!

Once you've sussed out all the different options, you'll find Star Control to be a source of many hours of computer entertainment. It's obvious that a lot of thought has gone into Star Control, making this a game woth checking out.

Craig Keevney



Build you empire throughout the universe

Watch out for that planet! Its gravitational pull could prove fatal

The graphics are small enough in "Arcade" mode, but just wait 'till you try out "Tactic" mode...

An everyday story of lovesick blobs...

THE POWER

Publisher: **Digital Distribution** Price: **£24.99**

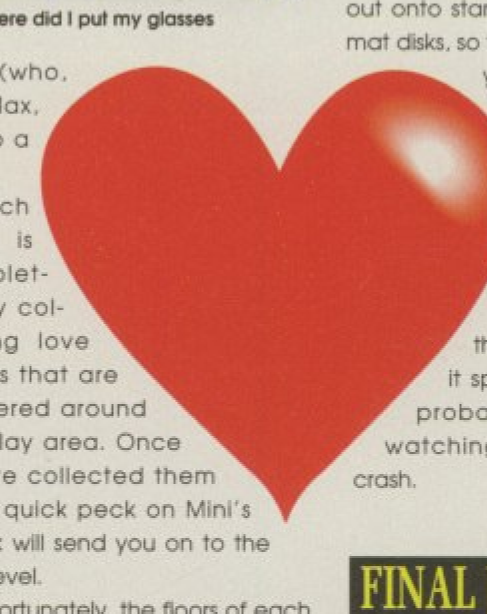
Have you got the power? If you didn't take up the Government's PowerGen share offer then you can still have some power if you buy Digital Distribution's latest offering.

Originally written by Demonware in Germany, The Power is a puzzle game with a difference – put simply, you'll be puzzled why you ever bought it! Only kidding, it isn't THAT bad.

You control Max, a lovesick, but smiling blob with a few wisps of hair and some feet poking out of his bottom.

...And here it is in all its glory – Tactic mode. Now where did I put my glasses

The aim of the game seems simple enough – you must guide Max through fifty levels of puzzling arcade action until he is finally reunited with the love of his life, Mini (who, like Max, is also a blob).



Each level is completed by collecting love hearts that are scattered around the play area. Once you've collected them all, a quick peck on Mini's cheek will send you on to the next level.

Unfortunately, the floors of each level are rather slippery, so once Max starts to move, he can only stop by colliding with another object (a bit like my car, really).

To make things a little easier however, many of the levels feature 'helping stones' that can be strategically positioned to help Max collect all the hearts. These helping stones come in three flavours – Red, Green and Blue. Problem is though, you have to be careful when moving two together, because certain combinations will cause the stones to be destroyed.

Once you've completed all 50 screens, there's a built-in level editor which will let you produce your own screens. These can be saved out onto standard AmigaDOS format disks, so there's no reason why you shouldn't be able to swap screens with your friends.

The Power is quite a fun little game, but it doesn't quite have that certain something that would make it special. As it is, you'd probably have more fun watching PowerGen shares crash.

Jason Holborn

If you're getting bored, then you can create your own screens with the built-in editor

Graphics

Deliberately small, but quite colourful. The game could have benefited from a bit of animation here and there, just to make it visually more interesting.

Sound

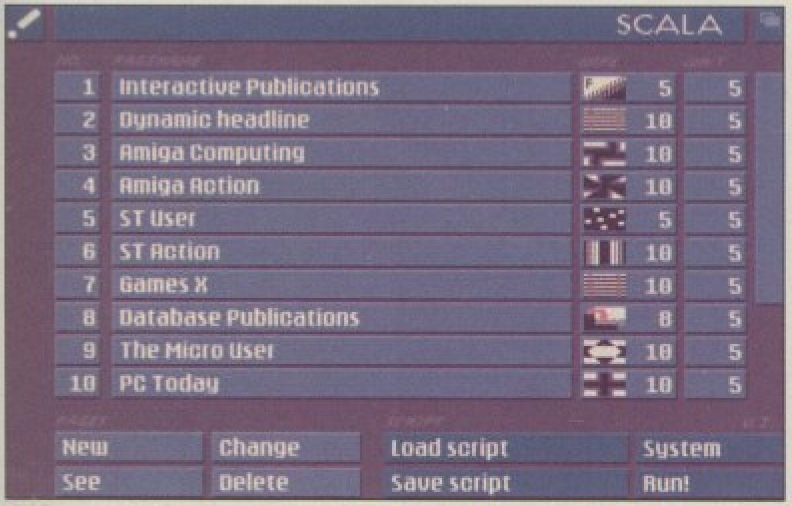
If you're into popular music, then you'll love The Power's theme tune which is a very well done adaptation of Snap's chart storming single, 'The Power'. Unfortunately, sound effects aren't quite up to the same standard.

Gameplay

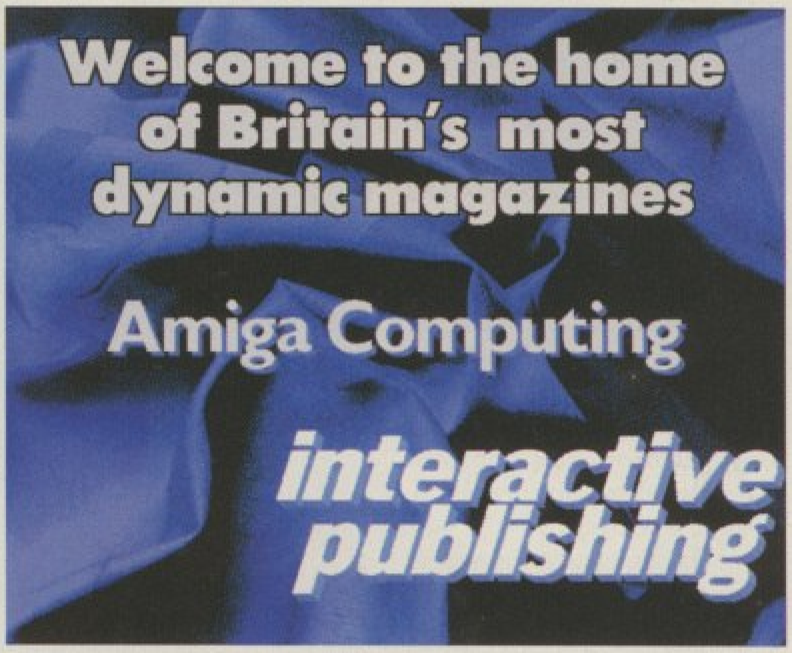
The Power's simplicity is perhaps its downfall - there's just not enough variety in there to keep you interested. Personally, I'd rather watch paint dry.

FINAL JUDGEMENT

5/5



Scala's presentation manager is a joy to use



Getting the message across

Got something to say? Eddie McKendrick gets persuasive with Scala

Over the last few months we have looked at a couple of video titling systems designed to allow DTV buffs to overlay professional titles and captions onto their epic productions.

It would be easy to pigeon-hole Scala into the same basket as packages like Broadcast Titler and The Big Alternative Scroller, both reviewed in our January 91 issue.

Scala will function quite happily as a titling program but the degree of sophistication offered makes it clear that this package is destined for much more.

Scala isn't just an inexpensive character generator – if one of those is what you are after see our look at Home Titler on Page 69 of this issue.

Scala has the rather grand remit of being a presentation system. Before diving into the mechanics of the package it makes sense to look at practical applications for it.

You are more likely to see the output of Scala in a board room or shopping centre than an edit suite. Presentation systems merge graphics with text to produce pleasant looking information displays. These systems convey anything from flight arrivals at airports to the latest profit and loss statistics for a multi-national company.

Visual impact

The Scala package allows presentations to be formed from three components; backgrounds, text and symbols. These elements come together to form "pages" of information.

Complete display sequences are built up by using Scala's beautifully simple presentation manager to wipe between these pages. What the presentation manager front end actually does is create a script file containing events written in Scala's proprietary display language, snappily titled "Visual". In Visual, everything is broken down into "events". An event can for instance be a picture, an animation or an IFF background.

Within each event it is possible to apply text, objects, colours and interactive "buttons". Events are totally independent of each other. It is possible to jump to a defined event directly from any point in a Visual script. This flexibility is necessary to make interactive applications practical.

Installing the system is a doddle, although it should be pointed out that the more modestly endowed Amigas could run into trouble. In order to use the package to its full potential a hard disk is required.

The manual cites this as recommended rather than essential but bearing in mind the entire package comes on no fewer than nine floppies it should be taken as a very strong recommendation.

Scala extensively utilises the Amiga's High-Res graphics mode, so stacks of memory is also prerequisite. Two megabytes of ram is enough to keep Scala happy, although it wouldn't complain if more was thrown at it.

Scala's backgrounds are high resolution IFF files. The package is supplied with a varied collection of excellent quality images.

Everything from artistic abstracts to cloud and seascapes are provided on five disks cram packed with art-library material.

If even after browsing through the supplied images you can't find something that fits your application it is possible to generate your own backgrounds. The standard range supplied with Scala can also be tweaked, dropping in bar charts and graphs where required for example.

Scala uses standard Amiga fonts, although those supplied are significantly better than the by now immortal Topaz. Seventeen font families are bundled with the system. A wide range of authentic adaptations of popular display faces are provided including Futura, Gill, Garamond and Helvetica.

If you are particularly desperate to utilise a font that doesn't cramp

your style it is just a simple if tedious matter of digging out a PD font editor, or dare I suggest even Commodores' FED. Armed with such a tool anyone has the potential to be a fully fledged Scala font foundry.

As well as fonts, the package is geared up to handle "Pictograms". These are graphic symbols rather than characters. Standard symbols supplied with the art-library include arrows, disabled logos, toilet and utility symbols. This gives some clue to the typical applications of the package.

I could not argue if you insisted that a pictogram of a gents toilet symbol is not a great deal of use for the average wedding video. It is however useful in public places like shopping and leisure centres. The next time you are directed to a convenience by a monitor, it could well be Scala at the heart of the machine.

Again, if you can't find a pictogram that takes your fancy it is a straightforward job to create your own, providing you have the time and a decent art package.

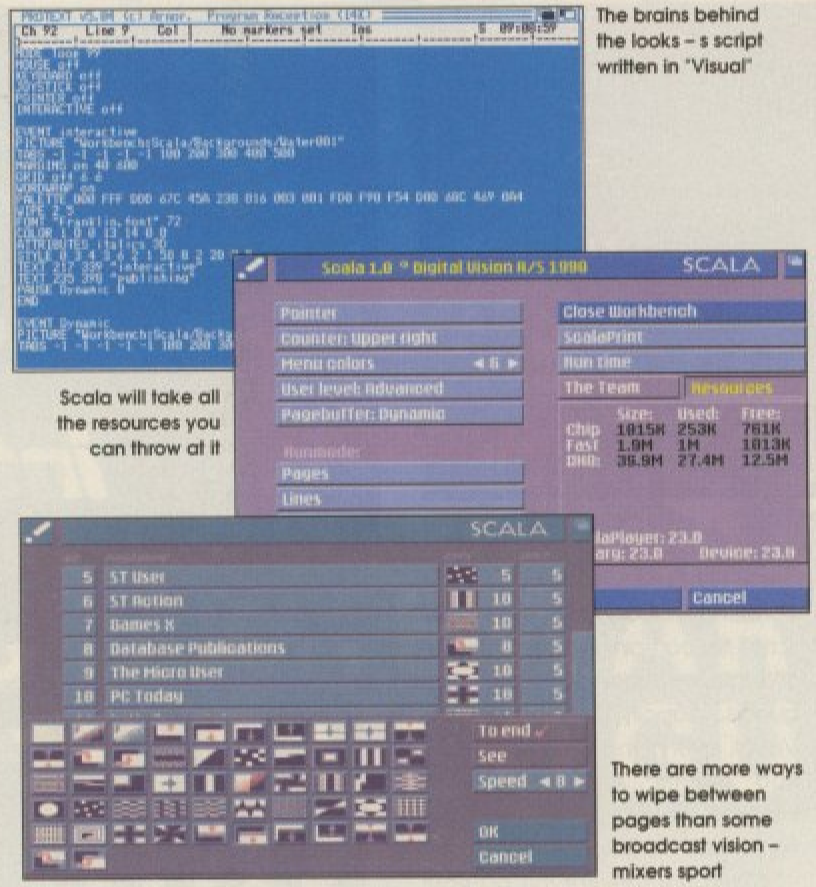
External input

Scala has no built in provision for creating pictograms or backgrounds. Instead it relies on importing IFF format files.

Backgrounds can be any standard IFF screen and pictograms usually start their life off as Deluxe Paint brushes. As well as static backgrounds, Scala will also cope happily with DPaint III animations.

A requirement for Deluxe Paint III popped up time and time again during a cursory test drive of the package. It would be fair to say that in order to take full advantage of Scala, DPaint is a virtual necessity.

It's not only the graphic element of your presentations that can be imported into Scala.



The brains behind the looks – s script written in "Visual"

Scala will take all the resources you can throw at it

There are more ways to wipe between pages than some broadcast vision – mixers sport

It is possible to input text using any word processor capable of saving in the generic ASCII format.

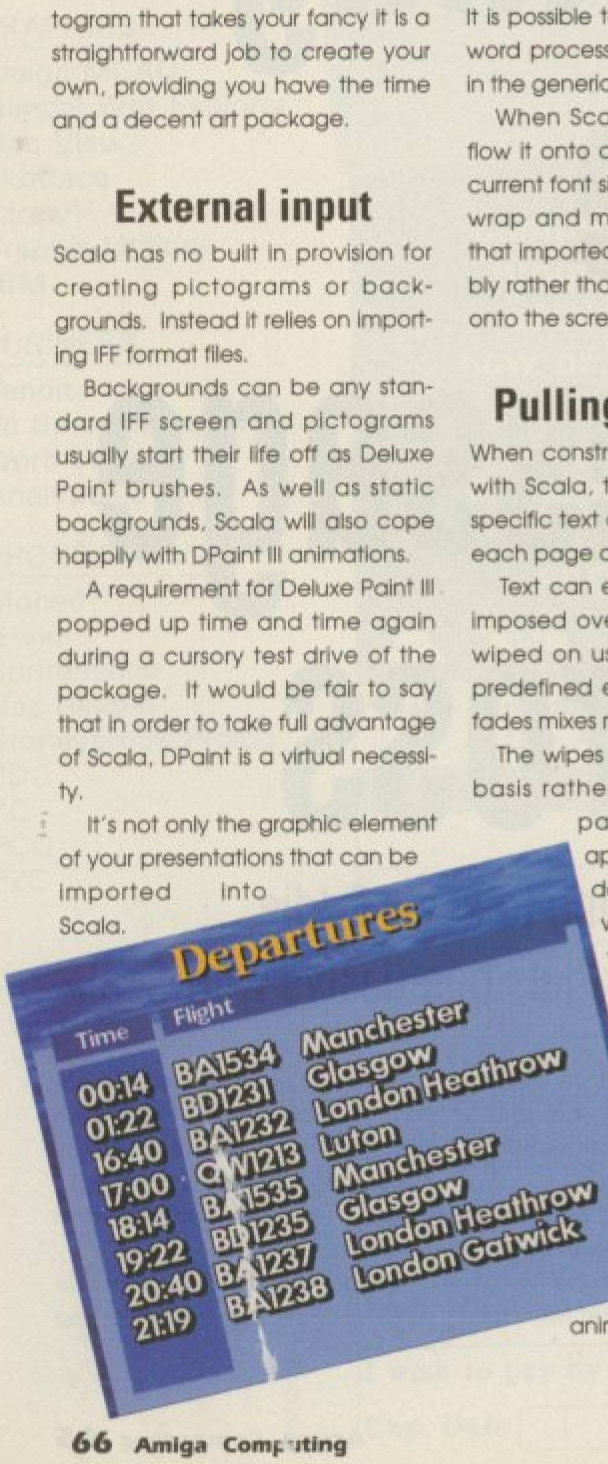
When Scala imports text it will flow it onto as many pages as the current font size dictates. The word wrap and margin options ensure that imported text is handled sensibly rather than just splatted ad-hoc onto the screen.

Pulling it together

When constructing a presentation with Scala, the system associates specific text and backgrounds with each page of the script.

Text can either be simply superimposed over the background or wiped on using a wide range of predefined effects. These include fades mixes moves and wipes.

The wipes work on a line by line basis rather than on the entire page of text. This approach offers a great deal of flexibility but be warned, if a complex wipe is chosen for each line, even the fastest transition speed will produce a snail-paced presentation.



As previously discussed, backgrounds can either be IFF files or ANIM format animations. As text always takes priority over backgrounds, an animated page will only commence after all text has been wiped onto it.

After a page has been completely displayed, Scala is ready to move on to the next in the sequence. There is a wide variety of options available for page changes. Transitions can either be immediate or after a delay defined in seconds. They can be straightforward cuts or one of a range of wipes.

By and large Scala handles page changes with a stunning degree of proficiency. Even in an Amiga strapped for memory, the system links complex animation sequences together with ease. The more memory you have, the faster page changes will be executed.

So far I have described how Scala copes with presenting information as a rolling demo. Another interesting aspect of the system is it's ability to construct totally interactive presentations.

On the button

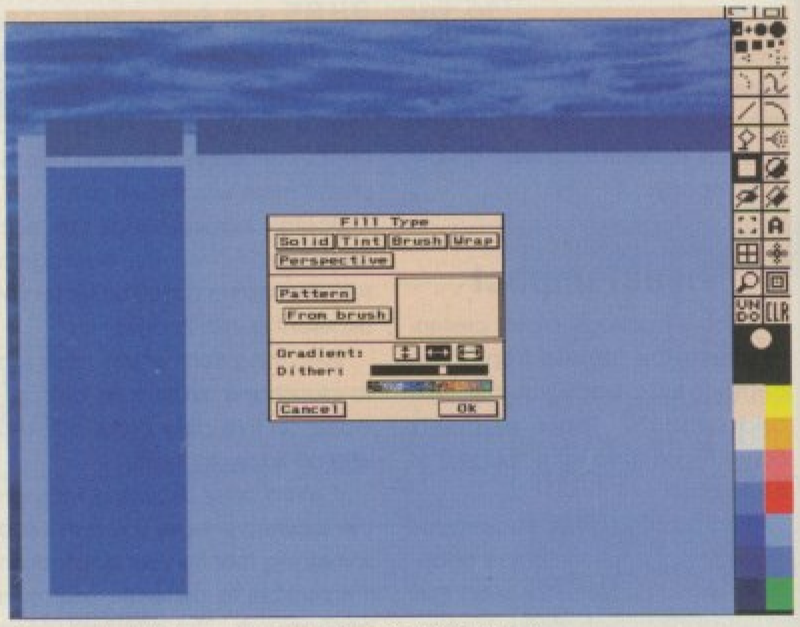
Instead of producing a simple script file containing details of delays and page transitions in a set sequence, it is possible to allow multiple-choice selections within a Scala page. This is achieved by defining "buttons" on the screen. When the system detects a mouse click over a button it will proceed to display the event which has been associated with it.

The interactive aspects of Scala make it ideal for point of sale applications where customers are searching for a specific product within a range. Other obvious uses include education and training packages. Potential applications for Scala are endless, yet at the same time they are quite specific.

If you have something to say and presentation is important, Scala is what you have been waiting for.

Titling videos of granny on the beach would be a waste of this superb program, and your money. Scala costs a not insubstantial £249 but it could be worth much more than that in the right hands.

Product: Scala
Manufacturer: Data Vision
Price: £249
Distributor: Silica Systems
Telephone: 081 309 1111



The standard backgrounds can be tweaked with D Paint

u have, the faster
ll be executed.
described how
presenting infor-
g demo. Another
t of the system is
truct totally inter-
ns.

button

ucing a simple
ining details of
transitions in a set
ossible to allow
elections within a
is achieved by
" on the screen.
detects a mouse
n it will proceed
vent which has
vith it.
aspects of Scala
oint of sale appli-
customers are
pecific product
her obvious uses
n and training
tial applications
less, yet at the
quite specific.
mething to say
n is important,
have been wait-

granny on the
a waste of this
nd your money.
substantial £249
rth much more
t hands.

Scala
Data Vision
249
a Systems
309 1111

HANDS ON EXPERIENCE

MULTI DPI MOUSE

- 9-25 Pin Adaptor
- 3½"-5¼" Disks
- Mouse Pocket
- Mouse Pad
- Variable Dpi from 100-800 Dpi
- Hardware switchable between PC mode & Microsoft mode
- Micro switch buttons
- Compatible with IBM·PC·XT·AT and Compatibles
- 1 Year Guarantee

CHALLENGER JOYSTICK

- Ergonomically designed handgrip
- Auto-fire with adjustable shooting speed
- Micro switches for durability
- Suitable for left or right hand players

- 6ft Operating distance (Infra red models)
- 45 Degree reception (Infra red models)
- Available in Grey or Clear
- Cable joystick model for Amiga · Atari
- Infra red model for Amiga · Atari C64/128·MSX·NEC·Sharp X1·Fujitsu
- The only infra red joystick for Sega Mega Drive

Infra red joystick requires one 9v PP3 battery

FIVE IN ONE MOUSE

- Compatible with
- Amiga · Atari ST
- Commodore PC-III Series
- Amstrad PC
- Schnieder Euro PC + AT286 Machines
- 220 Dpi resolution
- Tracking speed 350mm/Sec.
- Microswitch buttons
- Mouse Pocket
- Mouse Pad
- 1 Year Guarantee

CONTRIVER europe ltd

FIVE IN ONE MOUSE

Contriver products are available from main dealers

Telephone 0280 822803/4 • Fax 0280 822805

Simple controls and funky fonts, the perfect combination.

You don't have to be rich to get titled!

HT is the best budget titler to date. Paul Austin puts the facts in the frame

VIDEO titling is big business at the moment with a new titling package appearing almost weekly.

The format for these releases generally falls into one of two camps, either the full blown affair that does it all – flips, fades and wipes included, and all in near broadcast quality – or the bargain basement versions aimed directly at Mr Average with a video camera and an urge to add some style to Darren and Karen's big day.

As the name suggests, Home Titler falls into the second bracket, but only just. HT, as it will now be known, is quite simply the best budget titling system I've seen to date, boasting all of the essentials plus some added extras that put the icing on the cake.

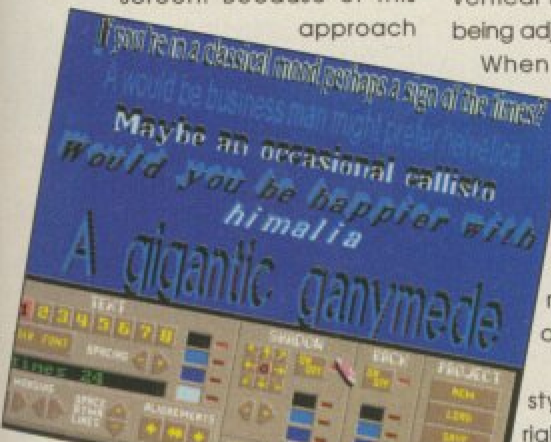
The software has two main strengths: firstly it's incredibly easy to use, and to prove it the manual is only four pages long – yes, that's right, four pages – and to be honest you won't need any of them; the second striking feature is HT's smoooooooth scrolling at any speed and with any font, either vertically or horizontally.

Framing the features

The range and diversity of standard Amiga fonts is huge and taking advantage of them is a real bonus, something which HT is more than happy to do. Many of its competitors are limited to a set of internal library fonts which soon becomes a restriction if you're a regular user.

Up to eight separate fonts can be used on each sequence, but each font must be on a separate line. They can't be mixed, which is one of the few faults within the system.

Each line of text appears to be treated almost as a separate screen. Because of this approach it's possible to mix all of the available fonts on separate lines, changing the colour combination as well as the depth of shadow and direction for each line of text on the screen.



Excellent effects made easy

Page setting

The actual appearance of a page is sometimes far more important than what it says. Impact in many cases is what's required rather than info. Fonts are the starting point but page setting can add the finishing touch.

HT is well supported in the page setting department. Background margins can be set for both vertical and horizontal scrolls, with the vertical scroll position itself also being adjustable.

When this is combined with definable letter and line spacing the appearance of an initially boring page can be transformed into a stylish, attention-grabbing masterpiece . . . well, almost.

The final aid to page styling comes from a left, right, or central justification feature which instantly shifts the text to the required screen position – a simple but useful feature to vary the format of your creations.

If you want to make an impact, colour is one of the best ways to do it. HT has four available colours. This no doubt seems limited but it's not quite that simple. Like some of its competitors HT has a RGB colour mixing system which can create a colour range from 4096 available tones.

This process can be applied to each of the four available screen colours allowing some very subtle combinations.

If you combine the range of colour with the potential a Genlock could add to your videos, HT starts to look like possibly the best specialist buy of the year.

Movement

It's all well and good having pretty fonts and stylish pages but if it doesn't scroll quickly and smoothly it's useless. Some titlers suffer from rather dodgy scrolling which seriously detracts from potentially excellent systems.

HT has no such problems, having a variety of scrolling abilities on a par with products many times the price. HT has two standard scrolls, either vertical or horizontal plus a snap page feature which instantly swaps entire pages of text rather than scrolling them.

The scrolls have a slide control option which gives a good range of speed which is happy scrolling even the largest fonts at reasonable speed.

Another nice touch is the addition of a variable scroll pause option. This again is simple but effective and adds a little more style to any scroll routine.

The pause between normal scrolls can also be altered, and of course if you want to use the titler as a presentation system your text could be looped continuously.

And finally

HT's only real fault is the software's inability to import ASCII text, an option which would be useful for certain applications. In every other department it's great and you can't fail to have notice my enthusiasm. In general it's great value and a joy to use. Highly recommended!

Home Titler £39.95
Genisoft
Unit 3, Poyle 14
Newlands Drive, Colnbrook
Berkshire, SL3 ODX
Tel 0753 680363
Fax 0753 680343

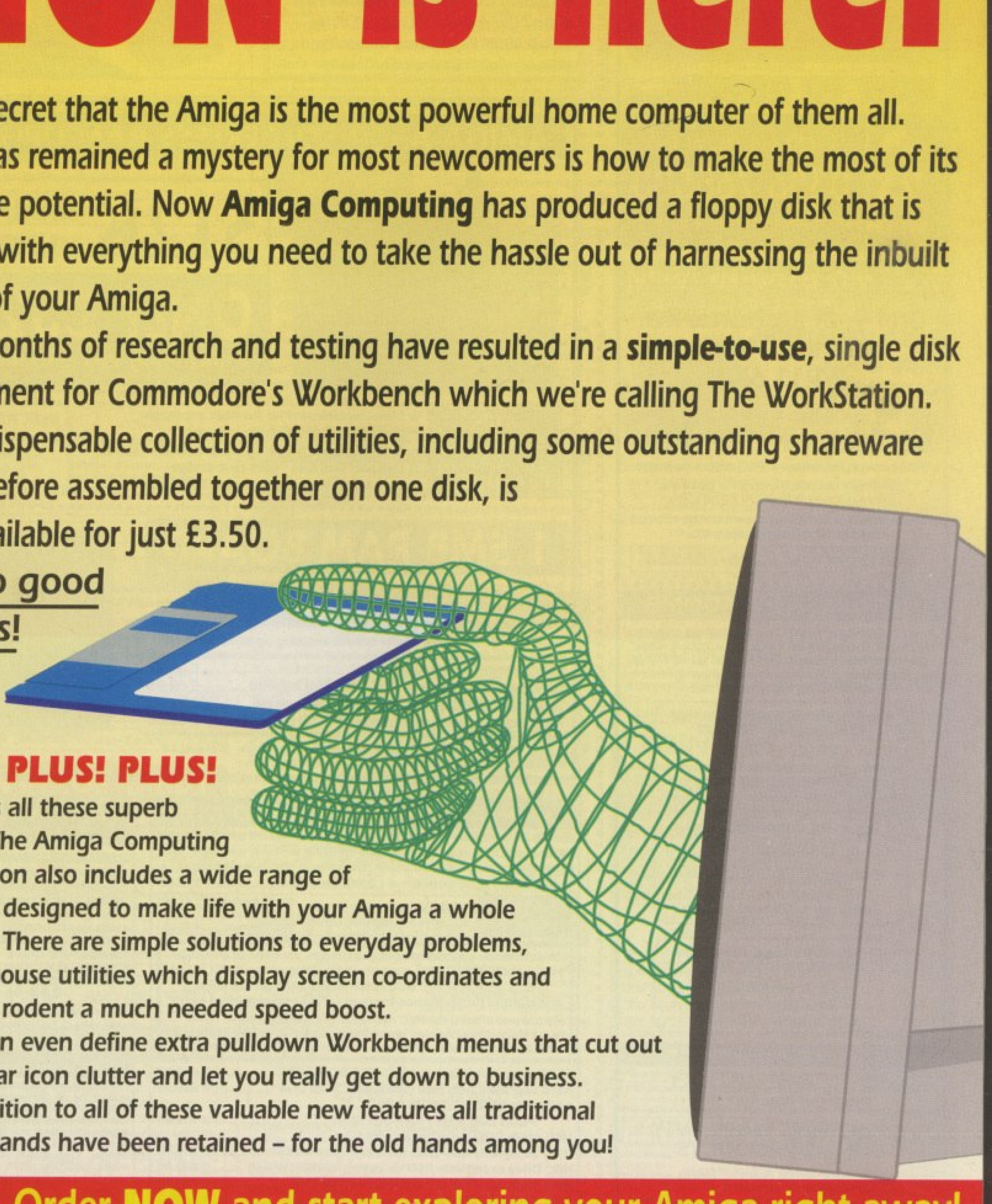
Baffled by backups? your problems are over.

TION is here!

It's no secret that the Amiga is the most powerful home computer of them all. What has remained a mystery for most newcomers is how to make the most of its immense potential. Now **Amiga Computing** has produced a floppy disk that is packed with everything you need to take the hassle out of harnessing the inbuilt power of your Amiga.

Many months of research and testing have resulted in a **simple-to-use**, single disk replacement for Commodore's Workbench which we're calling The WorkStation. This indispensable collection of utilities, including some outstanding shareware never before assembled together on one disk, is now available for just £3.50.

It's too good to miss!



PLUS! PLUS! PLUS!

As well as all these superb features The Amiga Computing WorkStation also includes a wide range of programs designed to make life with your Amiga a whole lot easier. There are simple solutions to everyday problems, such as mouse utilities which display screen co-ordinates and give your rodent a much needed speed boost.

- You can even define extra pulldown Workbench menus that cut out the familiar icon clutter and let you really get down to business.
- In addition to all of these valuable new features all traditional CLI commands have been retained – for the old hands among you!

month. Order **NOW** and start exploring your Amiga right away!

Evesham Micros

ALL PRICES INCLUDE VAT AND DELIVERY

***Express Courier* Delivery £5.00 Extra**

BUY WITH CONFIDENCE from one of the longest established companies in their field, with a reputation for good service and prices. We have invested heavily in a computer system to enable our Telesales staff to provide up-to-the-minute stock information, coupled with highly efficient order processing. Our fully equipped Workshop enables us to carry out almost any repair on our premises. We feel sure that you won't be disappointed if you choose Evesham Micros.

HOW TO ORDER....

Call us now on
0386 765500
Lines open Monday - Saturday, 9.00am - 5.30pm

Send Cheque, Postal Order or ACCESS/VISA card details to :

**Unit 9, St Richards Rd.
Evesham, Worcs
WR11 6XJ**

ACCESS / VISA Cards Welcome

Government, Education & PLC orders welcome
Same day despatch whenever possible
Express Courier delivery £5.00 extra
Please note that 5 working days must be allowed for *personal cheque* clearance.

Mail Order Fax: 0386-765354

RETAIL SHOWROOMS

All our Showroom outlets hold large stocks of most items and also supply from a far wider product range than advertised. Please do not hesitate to ring any of our showrooms and discuss your requirements with a member of our highly trained staff.

**Unit 9 St Richards Road, Evesham
Worcestershire WR11 6XJ**
☎ 0386 765180
fax : 0386 765354
Open Mon-Sat., 9.00 - 5.30

5 Glisson Rd, Cambridge CB1 2HA
☎ 0223 323898
fax : 0223 322883
Open Mon-Fri, 9.30 - 6.00
and Sat., 9.00 - 5.30
IBM dealer ● Corporate Specialist

**1762 Pershore Road, Cotteridge
Birmingham B30 3BH**
☎ 021 458 4564
fax : 021 433 3825
Open Mon-Sat., 9.00 - 5.30

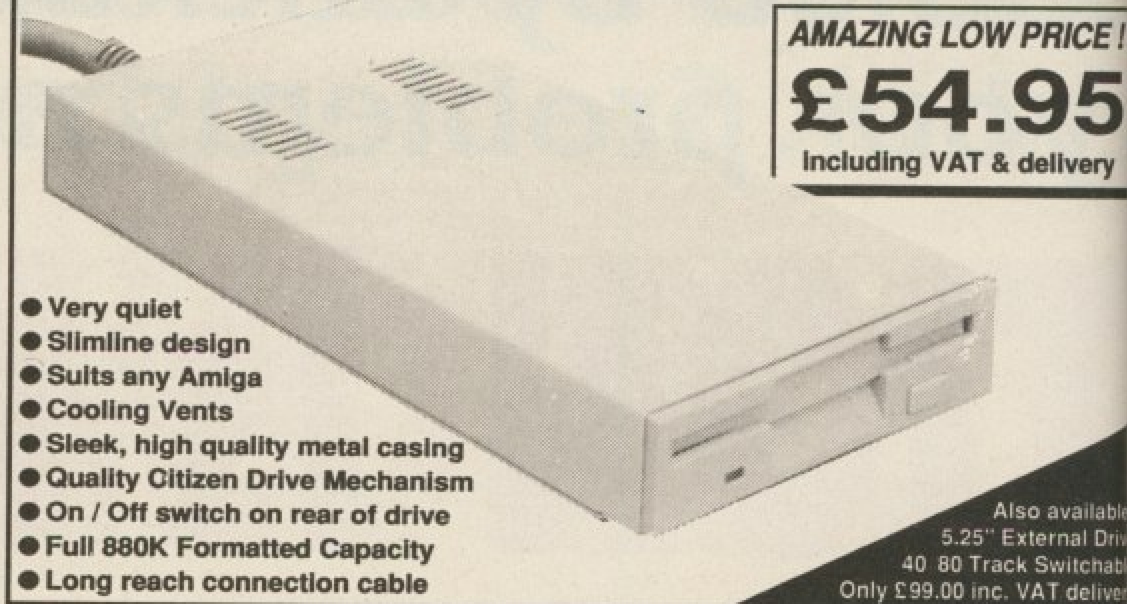
▼ TECHNICAL SUPPORT ▼

☎ 0386-40303
Monday to Friday, 9.30 - 5.30

12 MONTHS WARRANTY ON ALL PRODUCTS

All details correct at time of press
All goods subject to availability, E. & O.E.

3½" EXTERNAL FLOPPY DRIVES

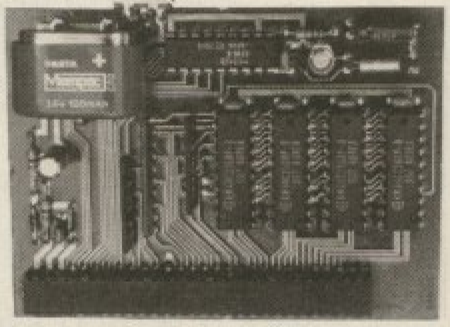


AMAZING LOW PRICE !
£54.95
Including VAT & delivery

- Very quiet
- Slimline design
- Suits any Amiga
- Cooling Vents
- Sleek, high quality metal casing
- Quality Citizen Drive Mechanism
- On / Off switch on rear of drive
- Full 880K Formatted Capacity
- Long reach connection cable

Also available
5.25" External Drive
40/80 Track Switchable
Only £99.00 inc. VAT delivery

AMIGA A500 SOLDERLESS RAM UPGRADES



512K RAM/CLOCK UPGRADE

ONLY £32.95

including VAT and delivery

512K RAM/CLOCK EXPANSION FEATURES :

- ☆ Direct replacement for the A501 expansion
- ☆ Convenient On / Off Memory Switch
- ☆ Auto-recharging battery backed Real-Time Clock
- ☆ Compact Unit Size : Ultra-neat design
- ☆ Only 4 low power consumption FASTRAMs

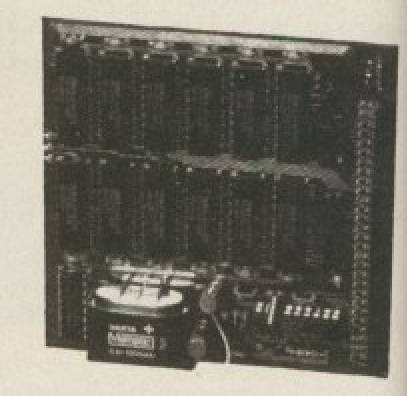
512K RAM Expansion also available without clock for only £27.95

1.5MB RAM BOARD

- ☆ Fully populated board increases total RAM in A500 to 2MB !
- ☆ Plugs into the trapdoor expansion, and connects to GARY chip
- ☆ Includes Auto-recharging battery-backed Real-Time Clock
- ☆ Socketed FASTRAM ICs for accommodating up to 1.5MB RAM

Unpopulated RAM board with clock	£ 39.95
RAM Board as above, with 512K FASTRAM installed	£ 59.95
RAM Board as above, with 1MB FASTRAM installed	£ 74.95
RAM Board as above, with 1.5Mb FASTRAM installed	£ 89.95

N.B. : The expansion board requires Kickstart 1.3 to operate - Kickstart 1.3 upgrade available from us for £29.95



COMMODORE A590 HARD DISK

Good quality Commodore Hard Disk unit, including its own PSU and built-in cooling fan. Features sockets for up to 2Mb of on-board FASTRAM expansion (see below). 80ms Access time, with up to 2.4Mb/sec. transfer rate. Autoboots when used with Kickstart 1.3.

Commodore A590 Hard Drive (20Mb Hard Disk) .... £ 279.00

A590 RAM UPGRADES — A590 RAM Upgrades are fitted free of charge when bought with an A590.

512K Upgrade	£ 31.95
1MB Upgrade	£ 59.95
2Mb Upgrade	£ 99.95

We currently support specially upgraded versions of the A590 incorporating NEC high capacity, fully autoparking SCSI drives (25ms access time). **SCSI interfaced hard drives offer a substantial performance increase over conventional units.**
We are also offering the NEC mechanisms seperately, either cased for those who wish to 'chain on' an additional hard disk to their A590, or on their own for internally replacing their existing A590 20Mb mechanism.

A590 upgraded with fast 40Mb NEC SCSI Disk	£ 479.00
A590 upgraded with fast 100Mb NEC SCSI Disk	£ 669.00
A590 with 40Mb NEC SCSI Disk, *PLUS* 2MB RAM FASTRAM fitted	£ 559.00
NEC 40Mb SCSI Drive cased with PSU to directly add-on to the Commodore A590	£ 349.00
NEC Drive cased with PSU as above, 100Mb version	£ 549.00
NEC 40Mb SCSI Drive mechanism on its own	£ 249.00
NEC 100Mb SCSI Drive mechanism on its own	£ 449.00

AMIGA 1500/2000 UPGRADES

HARD DRIVE / RAM UPGRADE BOARD KITS
Kits comprise of full size hard disk controller cards incorporating unpopulated SIMMS RAM expansion sockets for accomodating up to 8Mb RAM; PLUS high speed, fast access NEC SCSI hard disks.

40MB HARD DRIVE & INTERFACE / RAM CARD	£ 399.00
100MB HARD DRIVE & INTERFACE / RAM CARD	£ 599.00

PLEASE NOTE: These are unpopulated RAM sockets - Add £119.00 per 2Mb of RAM required.

8MB RAM Expansion Board with 2Mb D-RAM fitted, only .... £ 229.00

DISNEY ANIMATION STUDIO

The only full-featured animation/paint program to utilise state-of the art techniques that are characteristic of Disney-style animation. Special features let you superimpose your animations on background pictures. Sample animations, plus sound effect library included in the package, from which you can add to your creation. Supports IFF, Anim graphics formats and SONIX, SMUS and INSTR sound formats. Great price!

Normal RRP : £ 99.95

EVESHAM MICROS SPECIAL PRICE ... £69.95

ACCESSORIES

NEW! ZY-FI amplified stereo speakers

REALISE THE TRUE SOUND POTENTIAL OF YOUR AMIGA WITH THIS PAIR OF FULL RANGE SPEAKERS !

Your Amiga produces fine quality hi-fi stereo sound. Enjoy quality stereo sound reproduction *to the full* with this specially designed, great new twin speaker system! Features reflex ported speaker design with 3 separate drivers in each unit, and incorporates a built-in amplifier with adjustable volume control. Runs from PSU (supplied) or from batteries (not included).

ONLY £39.95 INCLUDING VAT AND DELIVERY

VIDI-AMIGA

VIDI-AMIGA

Widely regarded as the best in its category, VIDI-Amiga video digitiser enables you to -

- Have perfect freeze frame from any video, in up to 16 shades
- Grab real time 3-D images
- Store & replay action sequences
- Realise Desktop Video
- and much, much more

VIDI-Amiga is compatible with all video standards, eg.colour, B/W, VHS, Beta, PAL, NTSC etc.

VIDI-CHROME AMIGA

Colour frame grabbing upgrade enabling production of Red, Green and Blue elements when using a black/white camera, by use of filters. (Colour camera/video recorder users - see below).

VIDI-RGB

Automatically separates Red, Green and Blue colour signal from video recorder or camera, enabling easy production of colour pictures.

VIDI Amiga : £ 95.00 VIDI Chrome............ £ 16.95 VIDI RGB .... £ 64.95

MINIGEN Genlock Adapter .... £ 95.00

TRUEMOUSE

WE GUARANTEE that this is the smoothest, most responsive and accurate replacement mouse you can buy for the Amiga. Excellent performance, amazing low price !

£17.95 SATISFACTION GUARANTEED

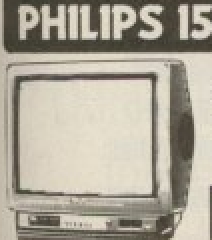
GOLDEN IMAGE OPTICAL MOUSE excellent travel & accuracy ... £ 37.95

GOLDEN IMAGE HANDY SCANNER + TOUCH-UP

Outstanding quality, excellent value for money - this package includes a 100-400dpi scanner with dither options, plus the amazingly powerful TOUCH-UP software package which drives the scanner directly. Scanner includes viewing window & backlight for accurate scans every time. Scan either line-art or grey images up to 400dpi. Many image enhancement & special effects available from within Touch-Up. A sensible investment for Desktop Publishing work.

£179.00 INCLUDING VAT AND DELIVERY

PHILIPS 15" TV/MONITOR



With its dedicated monitor input, this model combines the advantages of a high quality medium resolution colour monitor with the convenience of remote control Teletext TV - at an excellent low price !

£269.00 Including VAT, delivery & cable

Philips CM8833 Mk.II including cable .... £ 239.00

AMIGA NEW SPECIAL DEALS

AMIGA 500 SCREEN GEMS PACK

Top-selling package includes Amiga 500 **now includes 1Mb RAM**, plus 1Mb Drive and TV modulator, *also* 'Night Breed', 'The Beast 2', 'Back to the Future 2', 'Days of Thunder', 'Deluxe Paint II'.

A500 1MB SCREEN GEMS PACKAGE ...... £ 369.99

A500 Screen Gems Package PLUS Evesham Micros 3½" External Drive .. £ 419.99

LOOK WHAT ELSE YOU GET WHEN YOU BUY AN AMIGA FEATURE PACK FROM Evesham Micros

THESE *FABULOUS* GAMES:

Tracksuit Manager 90	Jaws	Treasure Trap
Block Alanche	Lost'N Maze	Discman
Battle Squadron	Diet Riot	Tank Battle
Nigel Mansell	Subbuteo	

PLUS! **A wordprocessor and spreadsheet**

AMIGA 500 CLASS OF THE 90'S PACK

Pack features A500 computer plus A501 512K RAM Upgrade, TV Modulator, 8 Software Titles, 10 Disks, Mouse Mat, Video Tape and more ....

CLASS OF THE 90's Package .... £ 549.00

Class of the 90's Pack *plus* 3½" Drive .. £ 600.00

AMIGA 1500 STARTER PACK

Includes A1500 computer (1Mb RAM, 2 x 3'/2" Drives, 8 expansion slots), Commodore Hi-Resolution Colour Monitor, plus Software including: 'Deluxe Paint III', 'Battle Chess', 'Sim City' and 'The Works' (business software).

A1500 STARTER PACKAGE.................... £ 949.00

AMIGA 500 COMPUTER BASE PACK

Features a Genuine UK version 512K Commodore Amiga 500 computer with 1Mb Internal Drive, TV Modulator, Mouse, Power Supply, KickStart 1.3, etc. *(Note: Does not include extra software package as with other packages above)*

Amiga 500 Base package......................... £ 299.99

A500 Pack as above, with 512K RAM / Clock Upgrade fitted.......... £ 329.99

A500 Pack with External 3½" Drive...... £ 349.99

A500 Pack with External 3½" Drive *and* 512K RAM / Clock Upgrade fitted.......... £ 379.99

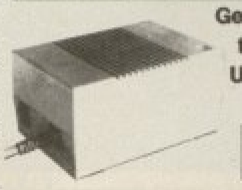
NEW! VIRUS PROTECTOR

BANISH VIRUS PROBLEMS!

Our compact Virus Protector fits easily to the Port of the last disk drive in your Amiga system, protecting all internal and external drives from boot block viruses. Incorporates a switch to enable or disable the protection facility. *Top value !*

ONLY £9.95

REPLACEMENT A500 PSU



Genuine Commodore Amiga A500 type replacement Power Supply Unit. Good quality 'switch mode' type. Super low price!

ONLY £39.95

MIDI INTERFACE

GET CONNECTED !

Our fully compatible, high quality MIDI interface connects directly with the Amiga serial port and provides IN, OUT & THRU ports for good flexibility. Features LED indicators on each port for diagnostic purposes. Superb compact design.

ONLY £19.95

STEREO SOUND SAMPLER

S-S-S-SAMPLE THIS !

Offering full compatibility with almost any Amiga audio digitiser package, our Sound Sampler features excellent circuitry, yielding professional results. The main A/D converter gives a digitising resolution of up to 50KHz, with a fast slew rate. Two phono sockets are provided for stereo line input, plus an option for microphone. Adjustable gain is achieved with built-in control knob. Complete with public domain disk containing sound

ONLY £29.95

KRAFT TRACKBALL

Very high quality trackball, directly compatible to any Amiga, ST or CBM'64, plus many others. Operates from the mouse or joystick port, and features selectable drag control / autofire button for versatility and better action. Left or right hand use, with total one-handed control. Top quality construction and opto-mechanical design, delivering high speed and accuracy every time. No driver software needed !

ONLY £44.95

AT-Once Hardware PC Emulator featuring CGA and Hercules emulation, support for hard disks and extended memory. No soldering needed for installation........................ £ 179.00

KCS Powerboard Hardware PC Emulator with its own 1Mb of RAM on-board, 512K useable in Amiga mode .... £ 229.99

Kickstart 1.3 Upgrade .... £ 29.95

Amiga 500 Dust Cover .... £ 4.95

NEW! olivetti DM124C

Outstanding 24 Pin COLOUR Printer

PROFESSIONAL QUALITY 24-PIN COLOUR PRINTING NOW AVAILABLE - AT AN AFFORDABLE PRICE !

Combining the advantages of advanced COLOUR output with the *superior* quality of Olivetti Professional 24-pin printing, the *new* DM124C represents excellent value for money! Consistent high quality is assured every time, with no ink excesses or pale lines at any speed. Peace Of Mind for trouble-free use is *Guaranteed*, with Olivetti's 12 Months On-Site Warranty cover !

- ☐ Fast 200 cps output in draft, 50 cps in Letter Quality mode
- ☐ 7 Colour output; Graphics resolution up to 360 x 180dpi
- ☐ Parallel Interface, Tractor & Single Sheet Feed as standard
- ☐ **Complete with cable & 12 MONTHS ON-SITE WARRANTY**

Olivetti DM124C Normal RRP: £ 389.95 Inc.VAT

Evesham Micros Special Offer Price **ONLY £269.00** Inc.VAT, Delivery & cable

- Automatic Cut Sheet Feeder available for only £ 79.95 -

PRINTERS

Prices include VAT, delivery and cable

EVESHAM MICROS SPECIAL OFFER !

All STAR Printers include 12 months On-Site Maintenance

Buying a Star LC10?

For a limited time, we are offering the Star LC-10 Mk.II at the same price of an LC-10!

Get the latest faster version for just **£159.00**

Price Inc. VAT, delivery, cable & 1 Year On-Site Warranty

Star LC 200 9-Pin Colour, 4 fonts, 180/45cps .. £ 209.00

Star LC 24-10 24-Pin, 4 fonts, 180/60cps .... £ 215.00

Star LC 24-200 24-Pin, 5 fonts, 200/67cps........ £ 249.00

Star LC 24-200C 7 colour version of above ...... £ 289.00

HP Deskjet 500 3 pages/minute, 300 DPI inkjet printer ..... £ 459.00

Olivetti DM100S 200/30 cps 9-pin, inc.12 months O/S/M... £ 115.00

Panasonic KXP1123 new 24-pin successor to KXP1124 .. £ 199.00

SOFTWARE

Kind Words 2	£ 37.50	Music-X 1.1	£ 110.00
Protext V5	£ 119.95	AMOS	£ 37.50
Digita Home Accounts	£ 18.95	HiSoft Lattice C	£ 179.00
Deluxe Paint 3	£ 59.95	GFA BASIC V3	£ 39.95
Deluxe Video 3	£ 59.95	GFA BASIC Compiler	£ 34.95
		Devpac 2.15	£ 44.95
		Roger Rabbit	£ 9.95

Word power with less power

QuickWrite brings slick word crunching to the unexpanded Stevie Kennedy

So you've got an Amiga 500 and you want to use it for wordprocessing? That's hardly a revolutionary concept in electronic applications, is it?

It's not as if you're into 3D ray tracing or some other memory-hungry application. Nothing simpler, right?

Er – wrong, I'm afraid. If you are the proud owner of an unexpanded Amiga 500, or even if you have a full meg of RAM, you've probably noticed the scarcity of decent packages for the wordsmith looking to knock out purple prose in the less than £100 price bracket.

The only widely available options are Protext and Kindwords, and both are found wanting when faced with beginners on a budget.

Protext is more expensive than you might find comfortable, and isn't the ideal easy-learner program.

Kindwords, on the other hand, is abysmally slow and only just about works on a machine with less than the full megabyte. Indeed, the only way to use the latter and remain sane is to fit your Amiga with 2Mb RAM and an '030 card!

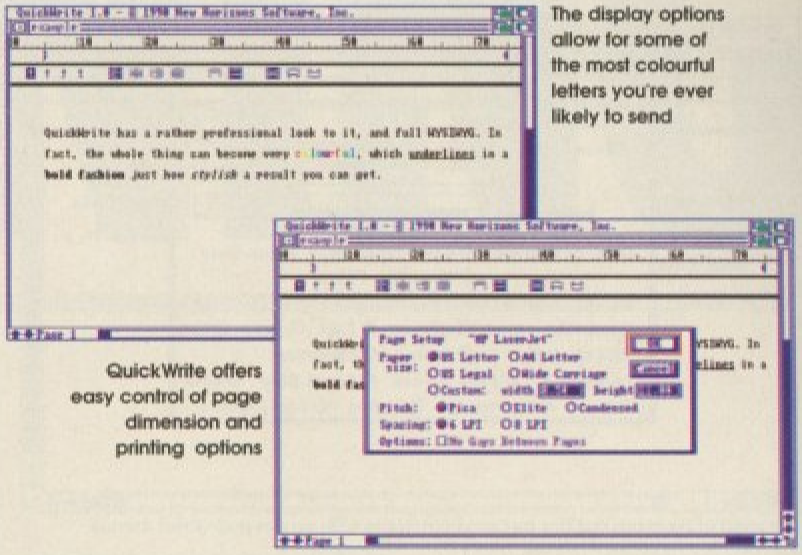
For quite a while, then, there has existed a potentially lucrative gap in the Wordprocessing market which only Arnor, by releasing Protext 5 and creating the conditions for price cuts on Protext 4.3, has come close to exploiting.

Companies in the U.S, however, appear to have grown wise to this and QuickWrite is the first quality low-end wordprocessing package to hit our shores as a result.

> *A welcome addition to the low end of the wordprocessor market*

Pedigree, chum!

The program has an obvious parentage, coming as it does from the same New Horizons stable as the worthy ProWrite package, and if you've ever used Excellence, which we reviewed a couple of months ago, an even more apparent role model.



The display options allow for some of the most colourful letters you're ever likely to send

QuickWrite offers easy control of page dimension and printing options

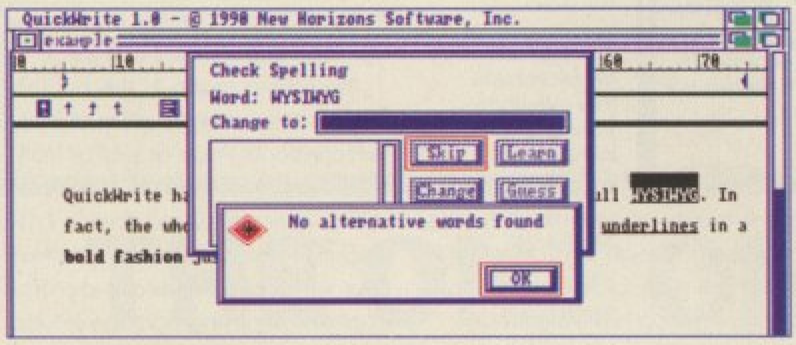
The program is an attempt to fit a fully specified wordprocesor complete with spell-checker not only into 512K but onto a single floppy as well. The happy child of such a wedding of compactness and usability, if it worked, would be a program with immense appeal to the A500 owner. So does it work?

On loading, QuickWrite has the immediate visual appeal of the American wordprocessors already mentioned, and certainly looks more professional than the rather chunky KindWords. The screen opens as a hi-res window which can be pushed to the background to run along with Workbench and documents open into their own resizable windows.

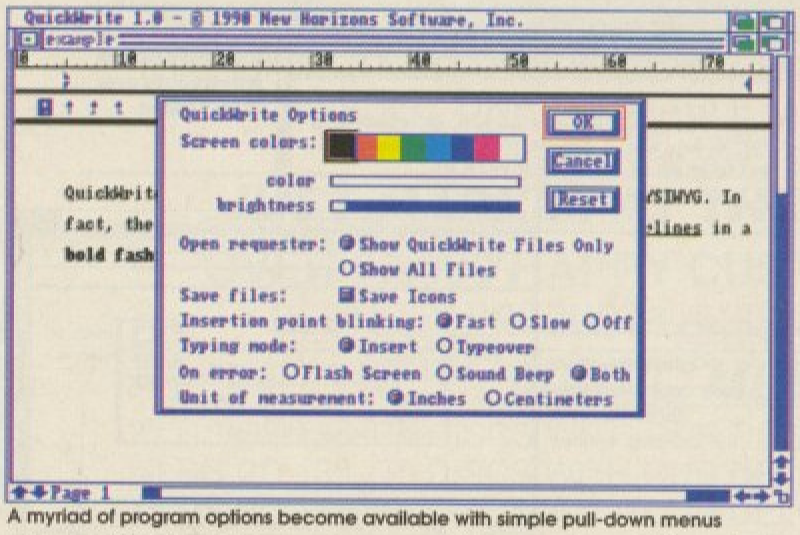
In this way multiple document editing is possible, but as the program is designed for systems with limited memory this otherwise desirable function has a limited use in QuickWrite.

If you're one of those people who is drawn to the list of 'features' normally found on the back of the packaging, you'll initially be impressed by QuickWrite. However, there's not a great deal there that you can't find in most other WP's.

QuickWrite is up to the usual spec, but it doesn't break any new ground. What it does break is the



The spell checker is adequate, but often shows its limited vocabulary



A myriad of program options become available with simple pull-down menus

price/performance barrier represented by better but more expensive programs such as Protext 5, and the inferior but generally cheaper KindWords.

Spell it out

The spelling checker is the package's most impressive feature. Not only is it actually on the same disk as the main program, but it contains a usable 50,000 words and can be added to as the user's requirements dictate.

KindWords scores over QuickWrite by recognising 90,000 words, but to use it on lengthy documents you need more than 512K, and to describe it as sluggish would be an understatement.

The QuickWrite dictionary, while smaller, is considerably faster, and can be speeded up even more if loaded into RAM. Using it thus will take up a full 120K, so there may not be enough space if your document is lengthy or your Amiga is unexpanded.

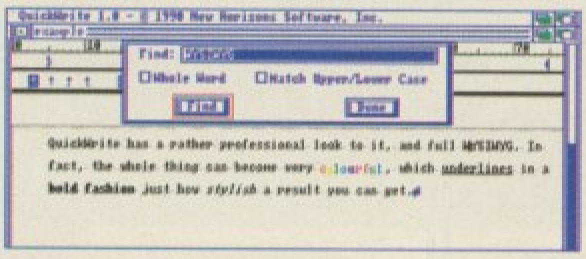
The disk, however, contains a RAMStart program which will open the RAM disk if it hasn't appeared during start-up, and transferring the dictionary to it is a simple matter of dragging its icon to the RAM disk window.

The spell-checker searches through the text from start to finish rather than utilising the more intelligent approach taken by Protext's Collins/Proximity Linguibase. This scans and then sorts the whole text into alphabetical order before checking it through, and can be very smooth in operation.

QuickWrite's start-to-finish method is less complex, but seems to be slower in checking, and certainly takes longer when changing or looking up a word.

Another minor point is that the relatively small size of the main dictionary means its suggestions for misspelt words fall far short of Thesaurus standards. In fact, it will often fail to find an alternative for words you could be forgiven for thinking are fairly common.

On the whole, though, it is fast and simple enough to do the job. In time, the user dictionary would no doubt fill up to the point where the main dictionary's shortfallings would be mostly offset, and only those with large vocabularies or



The usual options are available in their usual form - nothing to write home about!

specialised needs will find it very limiting to start with.

For those not in the know, macro is the term for a keypress (such as a function key) or combination of keypresses which has been predefined to stand for a sequence of other commands and actions.

The facility to use macros has hitherto been available only to more up-market packages, but with the addition of the AREXX multi-task communications language, QuickWrite can define ten macros.

This addition should not be understated – macros are more than just a gimmick and can cut out a great deal of tedious typing.

For instance, Macro 1 might be defined to reformat an entire paragraph, indent it, and fully justify it at the stroke of a key. Many users will find similarly routine operations which can be rendered less painful in this way, lending QuickWrite a much more professional touch.

Unfortunately, it is only the more ambitious user who will take advantage of the macros, as their use requires a bit of thought. In contrast with some low-end programs, where defining a macro is simply a case of starting the 'recorder' and carrying out the sequence of keystrokes you desire to be defined, QuickWrite uses its own macro 'language'.

This is more powerful and flexible than the simple recorder method, but is much more difficult to use and, even though well documented by the manual, is likely to scare off more than a few beginners.

No Wordprocessor can be judged solely by its on-screen abilities. They are, after all, intended to produce hard copy at the end of the day, and QuickWrite manages it with mercifully little fuss and bother. Unlike KindWords, which can rapidly run short of memory, and frequently crashes if a problem occurs during printing, QuickWrite copes well with large printing tasks.

The mail merge facility is controlled by only four simple rules to define how a merge list should look.

It allows the user to choose which records (such as individual addresses) are merged, so that letters may be sent to one portion of a long list, rather than the whole lot as demanded by KindWords's mail merge.

Files with a smile

File handling is carried out by way of a Mac-ish file requestor, which most Amiga users will find painfully slow.

To jump from one drive to the next when searching for a file, one has to click on a 'drives' gadget to go through them one at a time.

On a hard drive-based Mac, with its uncluttered desk top, this is fine, but on an Amiga sporting only floppies it can cause unnecessary rises in blood pressure. I would have welcomed an ARP file requestor or even a standard AmigaDOS one, which shows you how bad QuickWrite's can get.

The saving grace in this department is the option to save directly in Professional Page as well as standard QuickWrite and ASCII format.

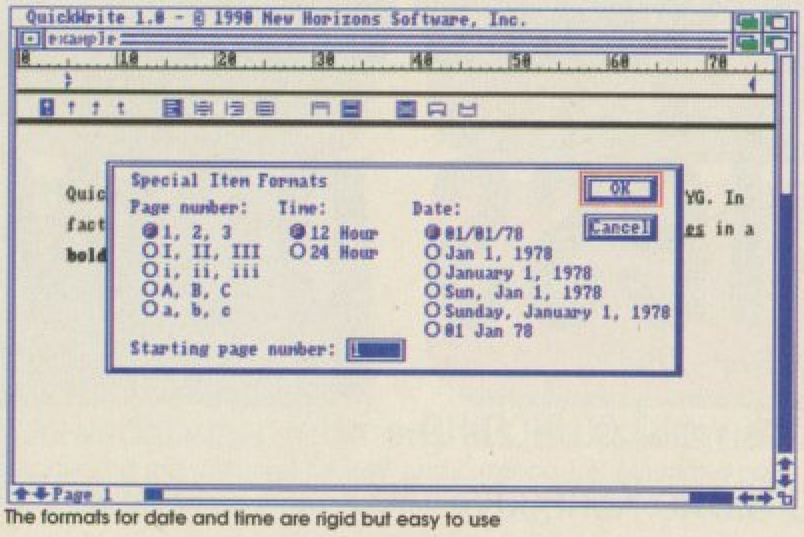
For users of Gold Disk's DTP package, the ability to import text files with no extraneous control codes or annoying carriage returns is a positive boon, and will greatly enhance QuickWrite's appeal to that particular market.

Conclusion

On the whole, QuickWrite is a welcome addition to the cheaper end of the Wordprocessor market. At first glance, it is more expensive than KindWords and is missing a thesaurus and the ability to import graphics files.

On further investigation, however, one can quickly discern a powerful, tightly coded, and memory-conscious package which should be ideal for those with limited memory or working with only one drive.

Price: £75
Supplier: Silica Systems
Tel: 081-309 1111



The formats for date and time are rigid but easy to use

The Amiga has long been the ugly sister in the eyes of serious DTP people, the Mac being their choice. Recently, however, the credibility gap between the two machines has been closed considerably by Pro Page, Page Stream, Page Setter and now ADPro.

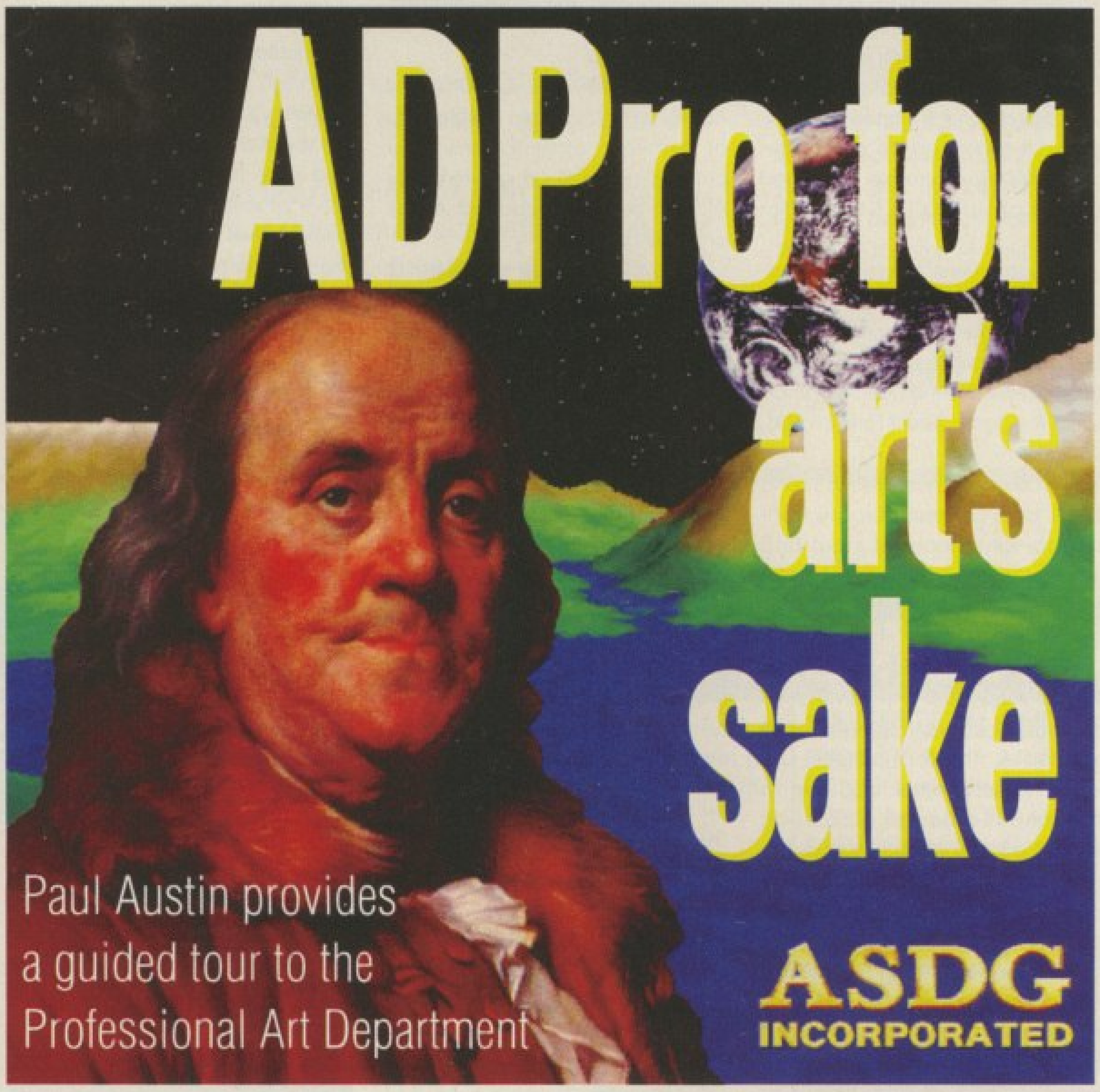
The Amiga boasts a whole range of under exploited publishing assets such as its incredible value for money and the amazingly efficient file formats. Not to mention some of the best graphic abilities in the business, regardless of price.

The reason for the Amiga's lack of publishing success falls firmly at the feet of image processing, or perhaps more accurately image conversion. And this is where ADPro comes into its own.

If you've ever tried to convert Amiga graphics to the Mac you'll be familiar with the problems involved. But now there is an alternative – to produce the entire publication on the Amiga. This has already been done with the Amigo Times, and is still employed by former AC editor Jeff Walker to turn out the monochrome Amiga mag JAM.

Cost effective

With the addition of ADPro to the Amiga's DTP stable, the field of semi-professional and indeed professional publishing is wide open for the infinitely more cost effective and flexible Amiga. OK it sounds good, but what exactly can it do? In short, ADPro is a collection of image processing tools which join forces to create and manipulate high quality images. The various elements are combined under a very smooth and stylish front end which makes complex image conversions as simple as clicking on an icon.



Perhaps the most common use for ADPro's assets will be its format conversion facilities. In order to swap an image from one format to the another ADPro uses external programs to load and save images.

As a result ADPro can be extended to read or write new or alternative formats by simply adding additional modules.

If you are an artistic soul ADPro rendering abilities might be more to your taste. The program can load up any image data and then render the results in any Amiga video format.

ASDG's rendering techniques have already made many a fan in the animation world and if you are after high quality quickly it's a godsend.

While we're on the subject of rendering and ray tracing, ADPro's abilities also stretch to rendering and enhancing images created with ray tracing software.

Why render images with ADPro rather than the software on which it was created? Quite simply, ADPro will render 24 bit planes better and faster than the parent programs themselves!

Perhaps the hottest property in Amiga graphics has to be the imminent release of 24-bit colour. The Amigan art world is waiting with sweaty palms for the release of the Harlequin frame buffer from

The opening screen of ADPro and the key to the Aladin's cave of features

ADPro can put the colour back into anyone's artwork

the Amiga Centre Scotland and its rival, the Masterboard VB1 from G2 Systems.

Both these products seem destined for success, and as a result the need for external software support whether it be rendering or conversion will soon become big business. ADPro has no problems handling 24 bit planes or the power it will unleash onto the printed page, not to mention the world of DTV.

If you've ever had dealings with commercial publishing you'll be familiar with the need for colour separations, which as the name suggests is the process by which the various colour elements of an image are divided ready for a colour print run.

ADPro can be used as the source of such separations in both 12 or 24 bit planes. The subsequent print quality of images processed in this way are excellent, and easily on a par with the Mac equivalent.

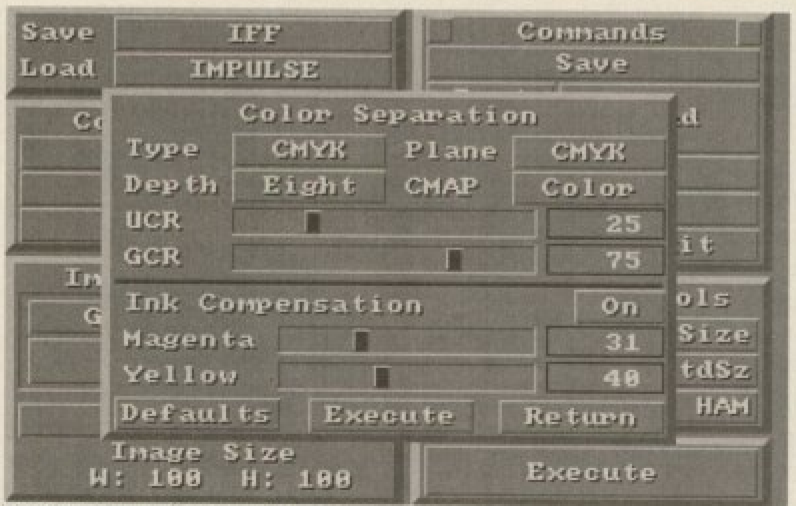
If your print requirements are slightly more unusual the software can still cater for your needs. Say you needed to render images for heat transfer on to materials such as cotton, ADPro can provide a suitable stencil.

If your dress sense is slightly more extravagant you could use the package's separation skills to produce films for three or four colour silk screening.

TAD or ADPro

The Art Department, or TAD as it's more commonly known, is the predecessor to ADPro and is still readily available from most suppliers. Both products are targeted at roughly the same area of the market, with each varying in abilities and price.

TAD is described as ASDG's entry level processing system, while



Would be Maxwell's will love the selection of separation controls

ADPro is considered to be the professionals' or power alternative. If your needs and finances are fairly limited it might well be worth looking at TAD which retails at around £70 as opposed to £199.95 for ADPro.

Perhaps one of the most impressive new features has to be run-time loadable Saver modules. This slightly mind-boggling mouthful basically means that ADPro can be used for generalised format conversion.

This new ability also allows you to use it as a general purpose front end for all manner of input and output, as well as a display tool for the output of scanners, frame buffers and so on.

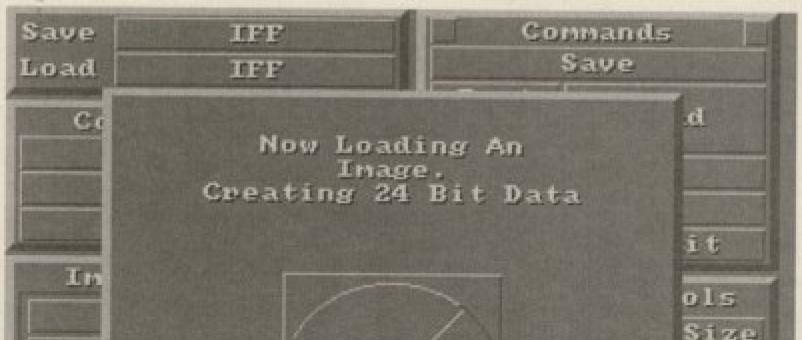
Many of the image processing functions built into TAD have been re-worked, and are now run-time loadable. These modules are known as operators, and due to the run-time design ASDG can release additional operators as the need appears. This should hopefully negate the need for future expensive upgrades.

Another asset which TAD did not offer is true colour composition. This allows you to actually edit 24 bit plane images even if you don't have a 24 bit display board or paint program.

ARexx is very well supported by ADPro, so if you're into batch, bulk, or network applications your dreams may well be answered by ADPro's skills in automated image processing.

Last but not least in the list of added attractions is the option to choose between standard Amiga palette or the enhanced palette mode which yields higher quality images if you want to display your wares on IBM compatible VGA and Super-VGA displays as well as the Commodore Hi-Res Graphics Adapter.

ADPro is, in effect, an umbrella under which several elements combine to perform there various skills. The external components of the system fall under three main headings Loaders, Savers and Operators.



ASDG's famous loading fan makes another appearance in ADPro's excellent front end

Loaders

Loader is a generic term for programs which read and interpret source image data from a wide variety of file formats accessed from disk. But their talents do not stop there. They can read or generate data from various sources other than disk.

If, for example, you were using a digitiser a loader could be written which would allow ADPro to load data direct from the digitiser itself.

Savers

Savers as the name suggests, do exactly that, and are used as a destination for image data. They're generally used to encode raw or rendered images into the file format you require.

Like Loaders, Savers also have their hidden talents, for example if you're working with a frame buffer you could write a Saver which would save the raw or rendered image data direct to the frame buffer. As a result the transferred data could be displayed direct from the buffer itself.

Operators

Lastly we have Operators, the workhorses of the system which are used for all kinds of general processing functions. Flexibility is their real strength, as they can input and output both raw and rendered image data as well as manipulate data within the program.

ADPro is firmly in the software for the specialist bracket, as the name and price tag suggests, but if you have problems with pictures this package will almost certainly solve them. It's a must for all would be press barons.

ADPro £199.95
Available from, Silica Shop
1-4 The Mews, Hatherley Rd
Sidcup, Kent, DA14 4DX
Tel 081 308 0888

As you may have guessed, there is a price to be paid for all the power of ADPro – its memory requirements are frightening. A good example is the image printed with this article. On screen it measures 640 by 640 pixels and is 24 bits deep. In order to load this image from disk you would need at least four megabytes of contiguous fast memory.

The image was composed within ADPro itself. Five separate images were used to create the finished product. The stars are a 1 bit-plane image made in Deluxe Paint.

The earth is a 24 bit scan with the landscape being a 24 bit image created with Vista. Ben Franklin is another 24 bit image scanned with a Sharp JX-300. The company name is made up of a three bit-plane Deluxe Paint creation using Kara Fonts.

Almost every format conversion is possible, GIF, IFF, PCX, Sculpt, Postscript, the list goes on and on. As well as the excellent internal features, a great job has been done on the front end and as a result the software is a dream to use, even for a novice.

ORBITAL

PUBLIC DOMAIN

ALL DISKS ARE 99 PENCE

OPD276	MADONNA VOUGE (4)
OPD277	VISION HOUSE
OPD278	CRIONICS NEVERWHERE
OPD279	HATRICK RAVE DEMO
OPD247	MASTER VIRUS KILLER
OPD245	FLASHBIER P.D. GAME
OPD257	GLIDEASCOPE 2
OPD259	DOPE INTO WRITER
OPD254	SONIX HOUSE 1
OPD235	NEW ORDER MUSIC 2
OPD217	TURTLE POWER
OPD275	AMAZING MUSIC 2 (3)
OPD273	BANGING RAVES
OPD272	BATMAN THE MOVIE
OPD271	MAYHEM P.D. GAME
OPD269	HORIZON MEGADEMO
OPD268	FILLET THE FISH
OPD264	BUDBRAIN MEGADEMO 2
OPD112	MADONNA SPANKY
OPD220	STAR TREK GAME 3 (2)
OPD211	THE WALL PINK FLOYD
OPD197	A COPY (DISK COPIER)
OPD114	D COPY (DISK COPIER)
OPD209	P COPY (DISK COPIER)
OPD200	SAFE SEX DEMO
OPD070	RAF MEGADEMO (2)
OPD150	ALF 2 MIX
OPD026	COMPUTER CONFLICT
OPD132	REBELS MEGADEMO 6
OPD184	BADGE KILLER DEMOS
OPD218	CAVE PARTY DEMO
OPD159	MADONNA SLIDESHOW
OPD199	WALKER DEMO 2 (M)
OPD236	SAM FOX SLIDESHOW (X)
OPD133	MUSIC MAESTRO 6
OPD005	PUGGS IN SPACE
OPD078	BUDBRAIN MEGADEMO 1 (2) (M)
OPD207	DRIP P.D. GAME (M)
OPD187	PSEUDO COP P.D. GAME
OPD169	JAZZBENCH
OPD083	SPACE ACE DEMO
OPD120	FRAXION HORROR (X)
OPD127	ROBOCOP DEMO
OPD139	COOL COUGAR
OPD191	BETTY BOO (MUSIC)
OPD252	808 STATE REMIX
OPD198	WALKER DEMO 1 (M)
OPD222	KIM WILD SLIDESHOW
OPD193	BODY TALK (X) (2)
OPD085	FRESH COLA MUSIC (2)

Numbers in ( ) means number of disks, M = 1 Meg, X = 18 years only

Price is 99 pence per disk + 50 pence p&p per order
Cheques/PO payable to Orbital P.D.
5 Green Lane, South Chailey, East Sussex BN8 4BT England.
All overseas orders are subject to a 30 pence per disk surcharge.
SAE for a free catalogue. Tel: 0273 401286

Why buy an ordinary sound sampler – when you can buy a recording studio?

TECHNOSOUND *Turbo*

SOUND SAMPLING SYSTEM FOR THE AMIGA

- ★ Song sequencer
- ★ Midi sequencer
- ★ Variable digital delay
- ★ Variable cut buffer
- ★ Full multi tasking
- ★ 57 recorded samples

- ★ State of the art true stereo cartridge
- ★ Over 100 interactive functions
- ★ Simple to use tutorial and user guide
- ★ Stunning real time effects include: Echo, Reverb, Hall, Voice Synthesis, Phaser and Vibrato
- ★ Extensive editing and looping facilities

Upgrade available to existing users for only £6.00 + £1.00 p&p

NEW DIMENSIONS

BROOKLANDS HOUSE
BRYNGWYN
RAGLAN
GWENT NP5 2AA
0291–690933/690901

Access VISA

£34.99

+ £1.50 POST AND PACKING

TOXIC!

NEW ... NEW ... NEW ...

A MAJOR NEW WEEKLY COMIC MAGAZINE

HEALTH WARNING:

If you know what's **BAD** for you: get TOXIC!... it's infectious

on sale March 21st

GO WITH THE FLOW

SCHOOL SOFTWARE LTD.

THE THREE BEARS (5 - 10)
IBM, ST, CPC, AMIGA.
Superbly reviewed educational adventure. Develops reading and imagination.

MAGIC MATHS (4 - 8)
IBM, PCW, ST, AMIGA.
Highly rated primary maths programs. Selection of games. Add and Subtract.

MATHS MANIA (8 - 12)
IBM, PCW, ST, AMIGA. "The best primary programs I have yet seen." Multiply, Divide, Maths Skills.

BETTER SPELLING (8 - 18)
IBM, ST, PCW, AMIGA, CPC, BBC, CBM (D). Highly acclaimed tutor. Received excellent reviews. Challenging.

BETTER MATHS (12 - 16 GCSE)
IBM, PCW, ST, AMIGA, CPC, CBM (D). Very comprehensive coverage of all the major aspects of maths for this age group. Excellent.

JUNIOR TYPIST (4 - 10)
IBM, ST, AMIGA. Keyboard trainer which helps spelling.

THE BEST IN EDUCATION

HOW TO ORDER
1. Post your order.
2. Fax your order.
3. Ring credit card number.
4. Ring for advice.
5. Ask your dealer to order.

Prices:
IBM 5¼ or 3½, ST & STE, AMIGA £22.95
CPC, PCW, CBM (disks) £16.95
FREE CATALOGUE

ORDER DIRECT TO:
School Software Ltd.,
Tait Business Centre,
Dominic Street, Limerick, Ireland.
Tel: (U.K.) 010 353-61-45399.
Fax Orders: 010 353-61-44315.
Credit Card Hotline (U.K.):
010 353-61-45399.
Others Tel: 010 353-61-45399.

SENLAC SOFTWARE PD

VISA · SWITCH · Access · BARCLAYS CONNECT

14 OAKLEA CLOSE, OLD ROAR ROAD,
ST LEONARDS ON SEA, EAST SUSSEX TNB7 7HB
TEL: 0424 455498 FAX: 0424 755093

MAIL ORDER PUBLIC DOMAIN LIBRARY

Personal Callers to our new shop at Unit 6, West Hill Arcade, George Street, Hastings

GRAPHICS

IFF Pixs I
IFF Pixs II
IFF Pixs III
IFF Pixs IV
IFF Pixs V
Fantasy I
Fantasy II
Fantasy III
Fantasy IV
Fantasy V
Fantasy VI
Photomontage I
Photomontage II
Photomontage III
Forgotten Realms
Paradise Slides
Joe II Slideshow
Nasa Digipixs I
Nasa Digipixs II
*Disney I**
Countach Fantasy I
Countach Fantasy II
Viz Slide Show
Agatron Reflections
Sun Connection
Galams Gate
Turbo Silver Masks
Nik Williams Broadcast

GAMES

Flashbier
Hack
Larn
Autobahn 3000
Zerg
Casino Craps
*Moria V3.0**
Empire
Cribbage
Trainset
PC Chess
Breakout
Frantic Freddie
Eatmine
Drip!
Tricky
Card Games
Blizzard
Return To Earth
Sub Culture Level 1
Kill to Free
Games Galore I
Games Galore II

DEMOS

Kefrens Mega
Coma
Red Sector (2)
Red Sector Cebit
Mental Hangover
Puggs In Space
Universal I & II
Demob I
Demob II
Vision Music
Vision Megademo IV
Vice Workbench
*Vangelis**
*Newtek (*2 ED)*
*Newtek III (*2 ED)*
Science 4.51
North Star (2)
Dexion Megademo
Highclass (UK)
Rebels Megademo
Amazing Demos VI
ESA Demos
Phenomena Megademo
Complex Bobs
Pulsifiers
Hardcrack GFX
JCS-Shellshock
Alcatraz Demo
Scoopex Demos
Triange Demos
Tetragon Megademos
Deathwarp I
Maximum Overdrive (2)
Cave Mega Demo II
Angels The Power
Amaze Final Absolutions
Crionics Total
Destruction
Animation
Horizon Sleeping Bag
Kefrens The Wall
Panics Vector Birds
Swapions Tera
Zing Art of Zing
Vertigo Fill 'em Up
Bud Brain Mega Demo I (2)
Bud Brain II

Minimum Order 2 disks.
Unless stated elsewhere prices as follows:
2-5 disks £2.00 each
6-9 disks £1.75 each
10-20 disks £1.50 each
20 or more disks 99p each

* = Requires 1 Meg
(2) = no. disks in set
(ED) = extra drive required

ANIMATION

1 MEG

Stealthy II
Walker II
Kuli (Pen)
Knight II
Rotating Ship
Shark
Gymnast
Walker I
Jet F15
Robo
Radio II
Italia Cinema
Congaman
Showbiz
Bad Bird
Billy The Kid
TV Commercials
Batman
Juggler 2

2 MEG
Vauxkiller (2)
Station at Kherne (3)
Lost In Scape (3)

1½ MEG
- At the Movies -
3+3 ½ MEG
Sentinel (2)

LATEST IN

Boomerang/Dominion/Gerbils/Star Trek/SEUCK £3.00
WB2 Workbench II Lookalike £3.00
Clerk V4.0 £3.00
C Lite £3.00
C Lite Anim. Disk £3.00
Anti Flicker £3.00

AMOS PD

Note: £2 per disk. No discounts for quantity
AMOS 19 Microman Music
AMOS 22 Funschool III Demo
AMOS 31 Screen Designer
AMOS 33 Pink Goes Ape
AMOS 35 Archivist
AMOS 21 Word Square Solver
AMOS 20 Arc Angel Demo
AMOS 32 Progs/Carn/Fearn/Nadeem
AMOS 34 Luke Miller Music
AMOS 36 AMOS/RAMOS 1.2 Updates
AMOS 38 FONTS #4
AMOS 52 F.R.U.
AMOS 53 Curos/Stavros Demo 2
AMOS 54 Amos Progs 2
AMOS 59 Super Quiz
AMOS 62 Arcadia
AMOS 64 Amos Prog 3
AMOS 76 Rainbow Warrior
AMOS 77 Amos Progs 5
AMOS 81 Juke Omega Demo 1
AMOS 82 Juke Omega Demo 2
AMOS 83 Amos Paint
AMOS 84 Luke Miller Music 3
AMOS 85 Reversi/Snakes & Ladders
AMOS 97 Dynamite Dick

AMOS LICENCEWARE

Note: £3.50 per disk. No discounts for quantity
LAPD I Colouring Book
LAPD II Arc Angel Maths
LAPD IV Thingamajig (1 meg)
LAPD V Jungle Bungle
LAPD VI Pukadu/Sprites
LAPD VII Four Way Lynx (1 meg)
LAPD VIII Work & Play (1 meg)
LAPD IX Assembler
LAPD X The Word Factory
LAPD XI Go-Getter (1 meg)

We are pleased to accept Switch and Connect cards for immediate despatch of disks

UTILITIES

Virus 4.1
Disksalv 1.42
ESA Utilities
FullForce III
Ghostwriter
D-Copy
Copiers I
TV GFX/Fonts (2)
Bootblocks (2)
Video Progs (2)
Graphics Apps (2)
Amiga/Atari GFX Convertors
Energy Utilities
SID V1.06
Aardvark Utilities
Mandle Generators
Archive Utils
ARP. 1.3 Installer
North Sea (1)
C Manual (1)
CLI Tutor

BUSINESS FINANCE

Wordwright
Bank'n
*Analyticalc**
Amibase
RIM
Spread
QBase/VC
Clerk
Inventory/Memopad
Journal
Analyticalc 3D (src only)

MISCELLANY

Raytracing
Sampled Sounds
Demo Creator
Dope Intro
MCAD V1.25
Rot
Jazzbench
Celtics Demo Maker (not 1.3 Roms)
Halloween Sample (2)
*Direct Action**
Utopia Postcards
Cando Support I
Cando Support II
Fractal Flight

TREKKERS!!

All new StarTrek (2)
Startrek (3 ED)*
StarTrek V2.0 (2 ED)*
*StarTrek Fleet Manoeuvre Anim**
*StarTrek Dry Dock Anim**
*StarTrek Enterprise Reliant Anim**
*StarTrek Miscellaneous Anims**
Trektrivia
*Enterprise Approaching**
*Karns Attack**

MUSIC

Soundtrackers (2)
Soundtrackers V4.0
Future Composer
Games Music Creator
Perfect Sound
Sound Editor
Compact Disk
*Hi Fi Player**
Instruments ST-02
Instruments ST-03
Instruments ST-04
Instruments ST-05
Instruments ST-06
Instruments ST-07
Instruments ST-08
Instruments ST-09
Instruments ST-10
Instruments ST-11
Instruments ST-21
Instruments ST-22
Instruments ST-92
Instruments ST-93
Instruments ST-94
Instruments ST-95
Instruments ST-96
Instruments ST-97
Instruments ST-99
Med V2.12
Soundtracker Professional
RIP Eruptions
Flashteam Music
Crusaders Freed Out
Crusaders Audio X
Crusaders Back to Base (not 1.3 Roms)
Med V.12
Sonix Play
Star Trekker (8 channel)
Pro Tracker 1.1A
Acid Mix I

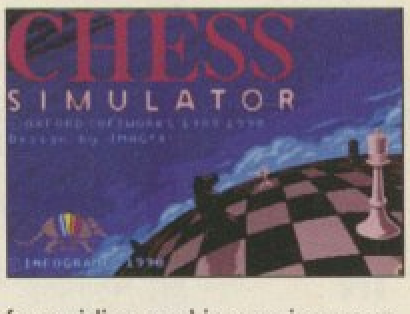
OVERSEAS - EEC *Please add* ***£2.00*** *to cover postage costs.* ***OVERSEAS - Australasia*** *Please add 50p per disk to cover Airmail costs. Credit Card & Postal Order payments despatched by return. Personal Cheque orders - please allow 7 working days for delivery from date of receipt.*

AMIGA COMPUTING

DISK BARGAINS

Chess Simulator

Infogrames have taken this timeless classic and added a whole range of added features to bring you Chess Simulator.



Chess Simulator is the ideal partner for budding Chess enthusiasts. It's perfect for guiding and improving your talents until you ultimately attain the standard of the Grand Masters. Infogrames' game includes a whole range of outstanding features including: An intelligent opening moves library, countless levels of play, advise options, save and restore options, 3D views and a wide range of different piece designs.

Our Price £19.95

American Dreams

NEW

Four action and strategy games are included in this sensational package from Infogrames.

Super Ski

Test your talent in **SUPER SKI** on the ski jump, slalom, giant slalom and downhill races.

HOSTAGE OPERATION JUPITER is a strategic operation in which you direct manoeuvres to release the hostages held by terrorists in an embassy.

OPERATION NEPTUNE involves you in underwater warfare, destroying enemy submarines and bases.

BUBBLE GHOST will keep you busy for hours trying to guide a fragile ghost through a castle's numerous traps.

Great value for money. Don't miss this offer!

Our Price £17.95

Future Dreams

NEW

Four unbeatable arcade games at an unbelievable price from Infogrames.

Purple Saturn Day

PURPLE SATURN DAY – A unique game which has achieved legendary status in the arcade games arena. Participate in the Intergalactic Games – if you dare!

SPIDERTRONIC – 3D action and digitised sound enhance this fascinating strategy game..

G.NIUS – Your space station has crashed on an unknown planet. Escape the wreck before it disintegrates around you. Timed action and a frantic pace.

WARLOCK'S QUEST – An arcade adventure swarming with evil creatures and sneaky, devilish traps. If you like arcade games, this one's for you.

Great value for money. Don't miss this offer!

Our Price £17.95

Welltris

Challenging arcade fun from Infogrames. Welltris is a wacky puzzle game that'll have you on the edge of your seat.

After the fabulous international hit, Tetris, join Alexey Pajitnov, grand mathematician of the Soviet Academy of Sciences, and take up his new challenge, Welltris: control the falling pieces, move the volumes and ultimately master space.

Welltris has a host of options including: Three levels of difficulty (beginner, advanced and expert), amazing 3D perspective, various game speeds, scoring system with top ten scores recorded.

100% pure Glastnost!

Our Price £19.95

TO ORDER PLEASE USE THE FORM ON PAGE 121

PUBLIC DOMAIN

Paul Austin lends a helping hand to pick the best PD from the rest

Here we are again, yet another collection of the best in the business. At last the Amiganuts,' domination has been eroded slightly by some excellent submissions from their competition. As a result you won't have to suffer my monthly moan about a lack of disks, so let's see what we've got.

Trace on the cheap

Anyone wanting to try their hand at ray tracing will soon find it often requires the loss of an arm, a leg, and a few other financial body bits before you find out if you're really into rendering.

So if your finances are slightly red faced DKBTrace could be an excellent alternative to spending heaps of cash on a commercial product.

This complete ray tracer supports arbitrary quadric surfaces, which when translated means spheres, ellipsoids, cones, cylinders, planes and so on. Various shading models are also available, plus reflection, refraction, marble, wood, and many other familiar ray tracing favourites.

It also has special case code to handle spheres, planes, triangles, and smooth triangles. If you use these special primitives, the rendering times can be reduced quite a bit when compared with general quadrics.

Version 2.0 includes the source code written in C. The whole thing has being bundled together on to one disk by the author, David K. Buck.

If you're the lucky owner of a 68020 or 68030 system with a 68881 or 68882 math co-processor, you'll find a completely separate version of the software on the disk designed just for you and your muscular machine.

As well as the program itself a whole range of utilities added to the package perform various weird and wonderful tricks of the trace.

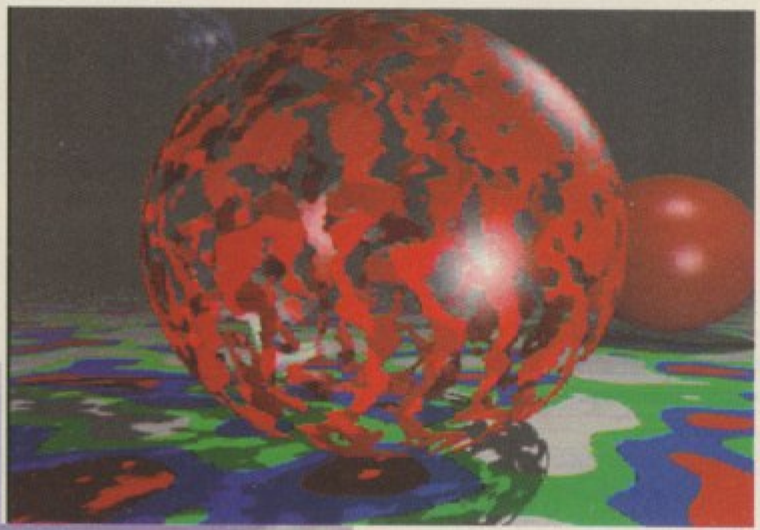
Dump to IFF will convert the raw 24 bit data from the ray tracer files into Hi-res HAM images. The colour palette used for the first image can then be used with the others.

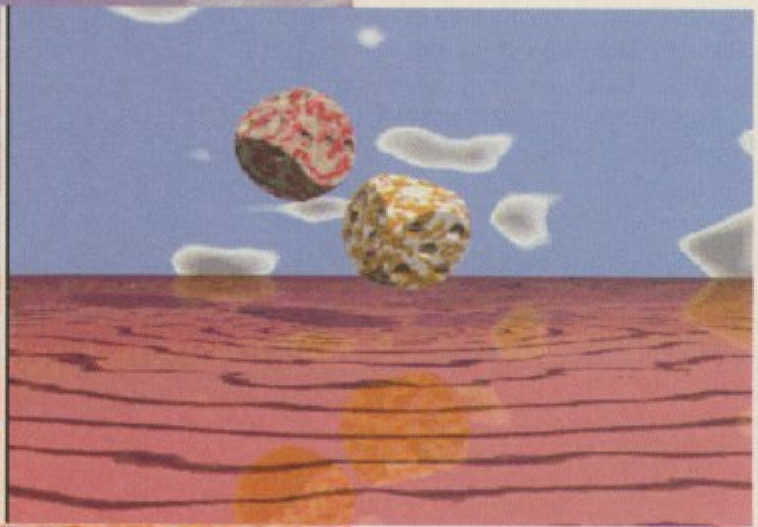
This is particularly useful for animations as the entire series of frames can be forced to use the same colour palette.

Dump2RGB can convert the raw 24 bit output files of the ray tracer into three separate dump files for red, green and blue. This might seem rather pointless to most people, but if you're into serious DTP the ability to separate colour is really useful.

Sculpt2DKB, the next of the extras, will convert a Sculpt-Animate 3D scene file into DKBTrace format. At the moment smoothed triangles are not supported and the only information directly converted concerns the polygons, colours and textures.

Light sources, viewpoints, other aspects are ignored but once the conversion is complete you can





A three way taster of the talents of DKBTrace

Possibly the best beastie blaster in the business.

always add these as required from DKB.

If you're already familiar with DKB in its earlier forms a document included describes the conversions required to use data files from 1.2 with the new improved 2.0.

As you can see from the screen shots, excellent results are possible. They're not perhaps the quality of some commercial creations, but considering the price difference this is a very impressive package indeed.

A beginner would be well advised to give the instructions a good read, as ray tracing is not the simplest of subjects and takes a little time to master.

In order to squash all the goodies on to one disk most of the elements have been archived and as a result need to be un-archived on to a separate disk. I'd recommend at least 1 meg or more if you're really interested in serious production.

MVK V2.0

Is your machine sneezing, shivering, and chewing up disks like Strepsils? If so it's sure to be suffering form the curse of modern computing, viral infection.

Fortunately for every idiot with a sick sense of humour there seems to be a knight in shinning armour waiting to leap to our defence and combat the bacterial beasties.

Stefan Ossowski is a fine example of a later day Lancelot, with his computing equivalent of a condom, Master virus Killer V2.0.

MVK is capable of spotting up to 105 viruses, an impressive figure and considerably more than many of its counterparts. It will detect both the file and boot block varieties and happily put them to the sword, whether they be on a floppy or hard drive.

The software does have one drawback, or advantage depending on your point of view. It will not run as a background task like Kill Da Virus or Zerovirus its competitors. Both of these sit on the menu bar and automatically check memory and disks as they are inserted.

The advantage of background checking is that nothing should slip through the net, as both KDVIII and Zerovirus can be run from the startup-sequence and remain active constantly.

The disadvantages arise if you regularly use disks with custom boot blocks or software which alters vectors. If you do, you'll soon become thoroughly sick of cancelling the alert warnings which are activated every time you insert a non-standard disk, even though you know it to be harmless.

In their defence both KDVIII and Zerovirus both can be taught to recognise new boot blocks, so it is possible to subdue their enthusiasm when checking regularly used disks which you know to be safe.

With MVK it's best to check any incoming disks and then immediately write protect them. That way you can be sure they're safe, and once protected they won't require any further attention. If you need to leave disks writable a background virus killer might be a better choice .

Master Virus Killer is available from: NBS, 132 Gunville Rd, Newport, I.W., PO30 5LH or from the good old Amiganuts united at 169 Dale Valley rd, Holybrook, Southhampton, SO1 6QX.

Posh pointers

Any programmer with a passion for pointers could take a look at Fred Fish 446 and its collection of normal and sleeping mouse pointers which you can combine with your own creations. As well as pointers there's a whole range of extra goodies available, so check it out.

Both disks, along with rest of the latest Fish disks, are available from Softville PD services on 0705 266509, or you could write to Softville at: Unit 5, Stratfield Park, Electra Avenue, Waterlooville, Hants PO7 7XN.

PD playtime

The award for best disk for this month has to go to number 903 in the Amiganuts United collection. It's a compilation of four excellent games bundled on to one disk.

Compilations are something of a rarity in recent Amiganuts releases with much of their latest licenceware firmly of the one disk,

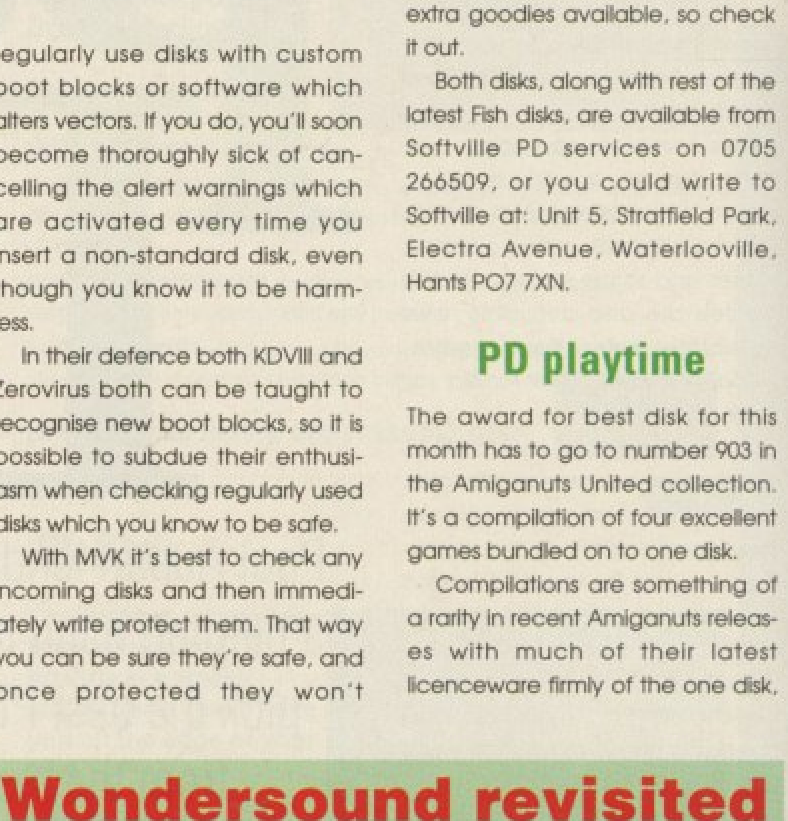
Wondersound revisited

According to the docs WonderSound is an addictive harmonic instrument design tool which allows you to create new sounds by manipulating envelopes, harmonic strengths and phase angles. These can then be save for use with other music utilities.

I wasn't convinced with claims of instant addiction. Trial and error with a large helping of patient experimentation would be a more accurate description.

The main revision to earlier releases is that all processed sound is passed through a low-pass filter, which lessens the high pitch distortion or aliasing which plagued Wondersound in the past.

The sounds created are rather basic and reminiscent of those produced with processing software on the Commodore 64. But if you're a patient soul with an urge to create new sounds WonderSound could be for you.



one game format. However, 903 comes as a refreshing change and is excellent value for money.

JEOPARD: First of the fab four involves a favourite subject with many a game designer – world domination. The action takes place on a large map of the world spread across the screen in gloriously flickering Hi-res.

Jeopard is the name, and domination's the game, with two to eight players taking part. Each battles against the next to conquer each others territories and finally rule the world. The outcome is determined by a combination of clever planning and an element of luck provided by the roll of the dice.

This is very similar to the well established board game Risk, which has long been available in the High Street, and more recently as a commercial release on the Amiga, amongst others.

Gameplay is in generally very impressive. The only real problem lies with the screen format. If you don't ownf a flicker fixture the infamous Hi-res flicker can be a real strain on the eyes.

MIGA MIND: This is the Amiga version of another smash hit, Mastermind. It is a popular subject in the PD and as a result several versions are available. This is perhaps not the prettiest one, nevertheless it plays perfectly and is useful as a Workbench toy.

Miga Mind is basically a logic game in which you pit your wits against the computer and its hidden code.

You must attempt to decipher the code before your limited opportunities run out and your Amiga once again reminds you who's the boss.

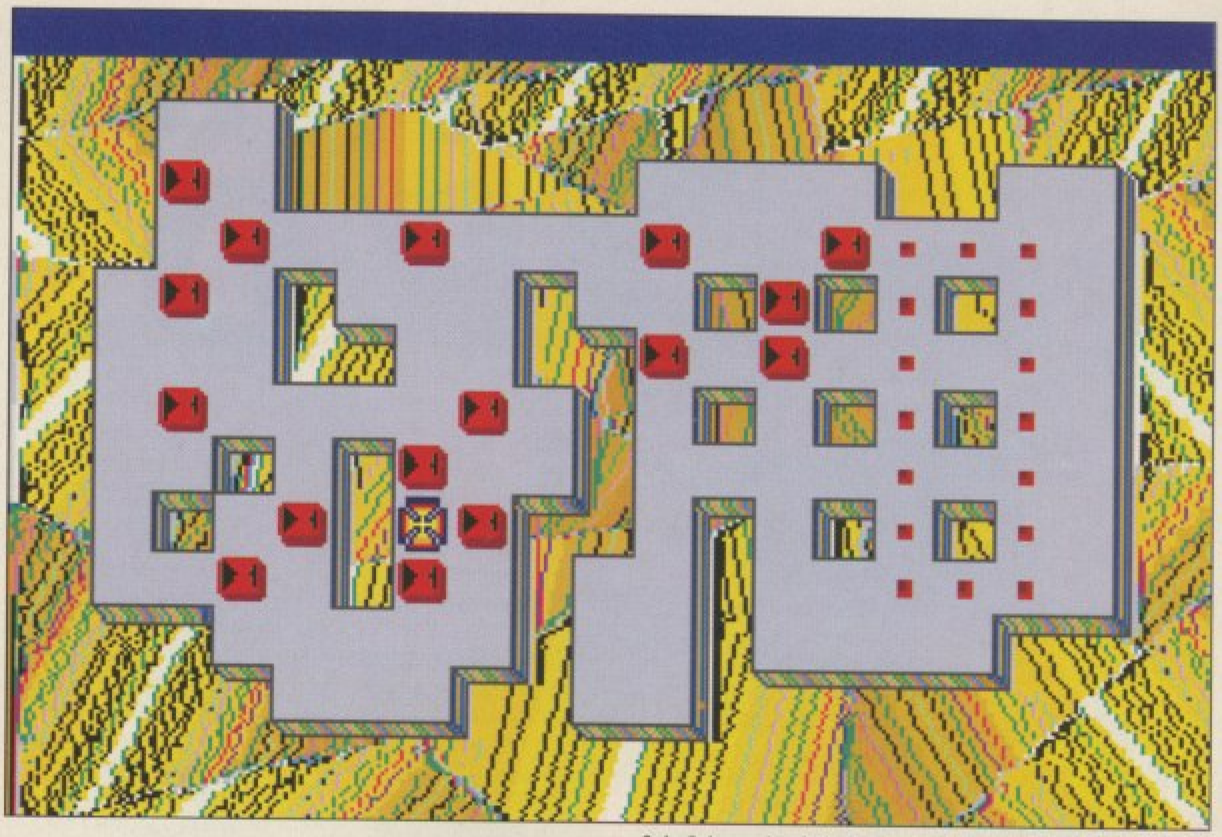
PIPELINE: If you're more of an arcade fan, the graphics and game play of Pipeline will be more to your taste, being not too dissimilar to Pipe Mania. Even so the undercurrent of logic still flows through to Pipeline, and if you are addicted to Titris and Weltris you'll certainly love Pipeline.

The idea is to create a route by which the oil can flow from A to B. On the left of the screen are five pieces of a pipeline. You can control the cursor position with a joystick, and as you press the fire button the piece on the bottom of the pile of five is placed in the current cursor-position. The four remaining pieces fall one position and a new (random) piece will appear at the top.

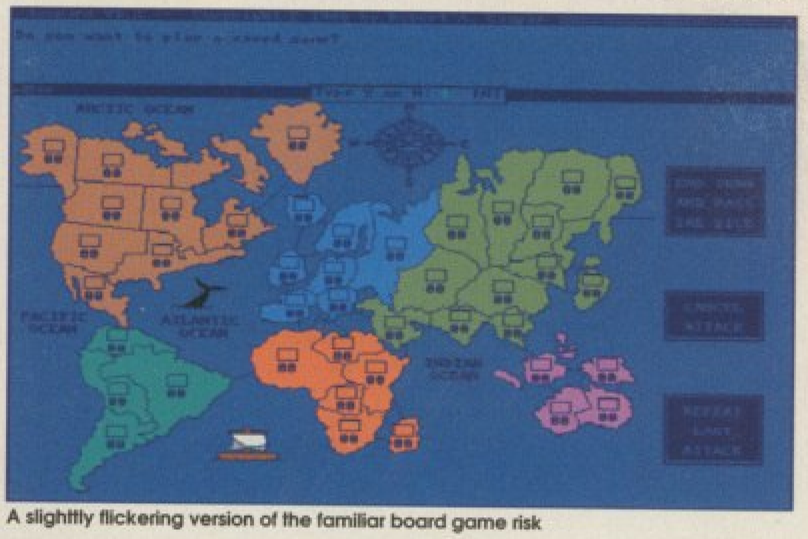
After a while black gold starts to flow, so you've got to get the pipe in place pretty quickly even on the early levels. Bonus points are awarded for complex connections which all add points towards the ultimate goal of entering the high score table in which you can be immortalised forever, as your name is written to disk.

SOKOSKY: This is perhaps my favourite offering on the disk. Sokosky is an ingenious puzzle game which involves a logical challenge combined with very attractive graphics.

The idea is to move numerous rubies around the playing area until they cover predetermined points on the board. This may



SokoSyky, a simple but splendidly addictive logic challenge.

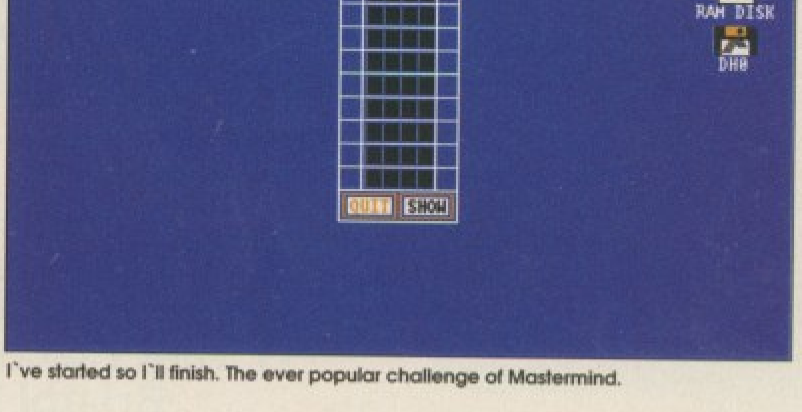


A slightly flickering version of the familiar board game risk

IFF2ANSI

This is one of the utils, and as the name suggests will turn any two colour low-res IFF picture into ANSI text which can then be displayed on any ANSI compatible terminal.

This could be very handy for demos or perhaps disk introductions. ASDG's TAD or Art Dept Pro are perfect for converting virtually any picture into a low-res one bitplane two color image which can then be fed to IFF2ANSI for conversion.



I've started so I'll finish. The ever popular challenge of Mastermind.

Fractals are by far
beautiful creations
emerge from the Am
you're interested in c
tion of pure logic ar
graphics it's an intrigu
If you want to
there's a fractal-ma
just waiting to len
hand. Mr Cade Ro
fanatic and as a
obsession he has b
compiling a multi-c
ing with all aspe
and their creation
The disks con
examples of fract
piled from Cade
tion. There's also
from various ut
together with ac
of products us
field.
The Amiga fr
the title of Cac
disks are prod
format, three c
for each issue
The first tw
able now and
available so
ed in anythin
I'd say Cad
The collect
Amiganuts
address.

sound simple
not. You'll soo
up in a very tr

Ami

IF you're ar
land lover
plunge, a h
just what y
turns rough
can come
overboard
A none
tion devo
moting th
ACC has
about c
boasts m
Once
ber it wi
lems yo
well as
also av
opmen
The
club is
is wic
doma
of hin
Th
alm
gua

Finally fractals

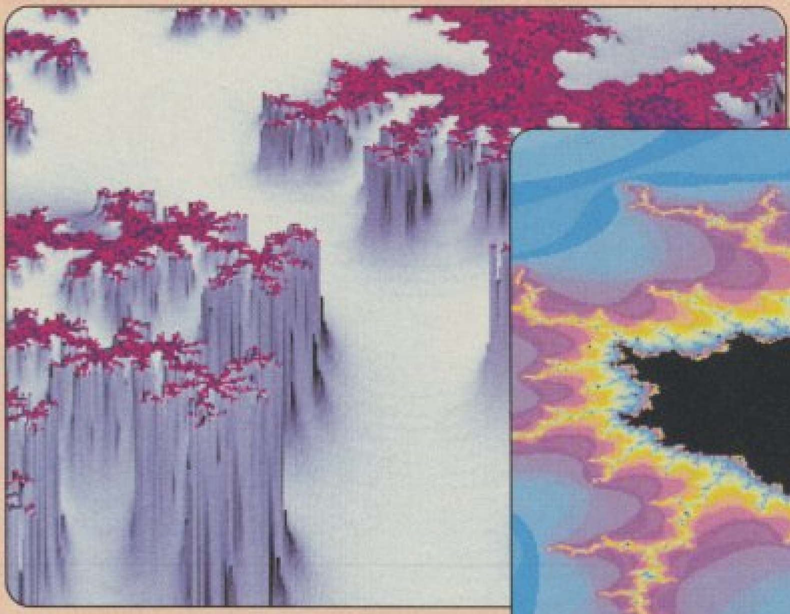
Fractals are by far the most beautiful creations ever to emerge from the Amiga, and if you're interested in a combination of pure logic and stunning graphics it's an intriguing subject.

If you want to know more there's a fractal-mad American just waiting to lend a helping hand. Mr Cade Roux is a fractal fanatic and as a result of his obsession he has been and still is compiling a multi-disk series dealing with all aspects of fractals and their creation.

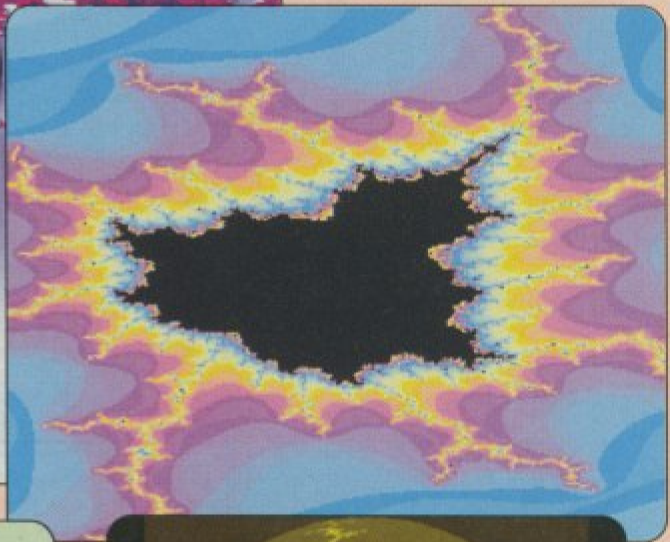
The disks contain the finest examples of fractal images compiled from Cade's huge collection. There's also practical help from various utilities thrown in together with advice and reviews of products used in the fractal field.

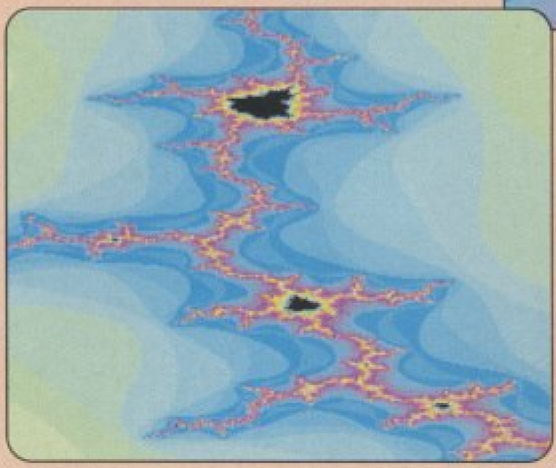
The Amiga fractal eXchange is the title of Cade's obsession. The disks are produced in magazine format, three disks being bundled for each issue.

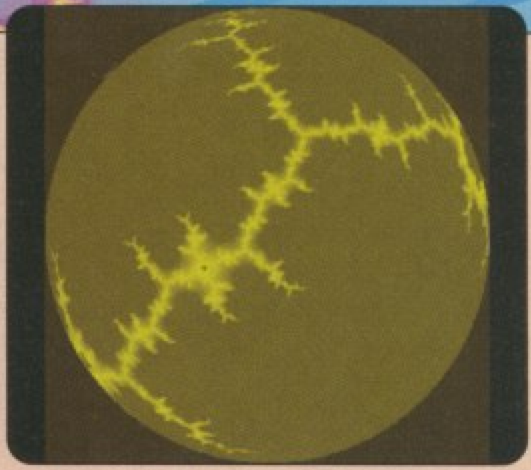
The first two issues are available now and the third should be available soon. If you're interested in anything to do with fractals I'd say Cade's disks are a must. The collection is available from Amiganuts United at the usual address.



The stunning world of fractals for a fraction of the price







sound simple but believe me it's not. You'll soon find it's easy to end up in a very tricky position.

Amiga C Club

IF you're an old C dog or just a land lover thinking of taking the plunge, a helping hand could be just what you need when the C turns rough. And the Amiga C Club can come to the aid of those lost overboard.

A none profit making organisation devoted to helping and promoting the language worldwide, ACC has only been in existence for about a year but nevertheless boasts members in 35 countries.

Once you're a registered member it will try to help solve any problems you have concerning C. As well as practical help, software is also available to speed your development.

The main learning tool of the club is the Amiga C Manual, which is widely available in the public domain. It consists of four disks full of hints, tips and routines.

There are chapters concerning almost every aspect of the language, and all the examples are already compiled, so you can start experimenting immediately.

The manual is kept up to date by the members themselves, with the constant addition of new elements and revisions of the old.

Registered owners automatically receive new versions at cost, plus access to video and sound sampling by simply sending in disks and tapes which are then processed and returned free of charge.

If you are seriously into C it might be money very well spent. The registration fee is £20 which should be included with your details to:

Amiga C Club (ACC)
Anders Bjerin
Tulevagen 22
181 41 Lidingo
Sweden

Games Galore V5

If you are in the market for more straightforward arcade action Seventeen Bit has the answer with one of the latest additions to the Games Galore series.

Volume 5, like the rest in the series, is bulging with software. In this case nine separate programs are squeezed on to the disk, some old favourites like Pac-man and Monopoly as well as an excellent Star Trek trivia quiz. A must for any Trekie who knows his Tribbles.

As usual there's an excellent selection on offer and if you're lucky Volume 6 should be available by the time you read this article, so it might be worth inquiring with Seventeen Bit when you order.

The next generation

If you're a modern day Trekie you'll probably be more familiar with Captain Pickard than Captain Kirk. If so there's a new trivia release for fans of the next generation.

An initial two-disk set is the starting point for a planned series which can be found on Fish Disks 404 and 405. They contain over 500 questions based on the first series with more than 50 audio/video clues.

These disks contain the game module and part 1 of the Trivia Database. You must have both disks as 405 contains the rest of the Trivia Database and the required player program for the quiz. Disks available from NBS and others.

Well that's it for this month. As usual, if there's anything you want to see, moan or rave about, drop me a line:

Paul Austin
Amiga Computing
Europa House
Adlington Park
Macclesfield
Cheshire, SK10 4NP

WE WILL BEAT THAT PRICE UNTIL IT HURTS

WE WILL BEAT THAT PRICE UNTIL IT SCREAMS

DIAMOND

COMPUTER SYSTEMS LTD

On all OKI, Commodore & Philips computer products and peripherals, we **will** match any lower quoted price from **any** of our competitors and give you an **extra £5.00** off. This applies only to genuine U.K. stock. **Our staff will smile even if we lose money.**

NEW 1Mb AMIGA — PACK 1 — NEW 1Mb AMIGA

AMIGA 500 MEGA PACK INCORPORATING AMIGA 500 +

* 512K RAM
* 1Mb Disk Drive
* 4096 Colours
* Mouse
* Extra 512k RAM with Clock
* Three Manuals
* Operating System
* Built-in Speech
* T.V. Modulator

ONLY **£285.00**

WITH

8833 MK II Colour Monitor ONLY **£449.00**

PACK 2

AMIGA 500 MEGA PACK INCORPORATING

* 512K RAM
* 1Mb Disk Drive
* 4096 Colours
* Mouse
* T.V. Modulator
* Three Manuals
* Operating System
* Built-in Speech Synthesis

*** MEGA PACK 20 GAMES ***

Chess Player, Datastorm, Dungeon Quest, E-Motion, Grand Monster Slam, Kid Gloves, Rick Dangerous, RVF Honda, Shufflepuck Cafe, Soccer, Golden Axe, Hard Drivin, Phobia, North + South, Silkworm, Shockwave, Continental Circus, Turrican, X-Out, Ninja Warriors + JOYSTICK

ONLY **£309.00**

WITH

8833 MK II Colour Monitor ONLY**£475.00**

NEW PACK 3 NEW

AMIGA 500 AXE PACK INCORPORATING

* 512K RAM
* 1Mb Disk Drive
* 4096 Colours
* Mouse
* T.V. Modulator
* Three Manuals
* Operating System
* Built-in Speech Synthesis

*** 10 GAMES ***

Golden Axe, Hard Drivin', Phobia, North & South, Silk Worm, Shockwave, Continental Circus, Turrican, Ninja Warriors + JOYSTICK

ONLY **£285.00**

WITH

8833 MK II Colour Monitor ONLY **£449.00**

PACK 4

AMIGA 500 SKILL PACK INCORPORATING AMIGA 500 +

* Disk Storage Box
* 1Mb Disk Drive
* 4096 Colours
* Mouse
* T.V. Modulator
* Dust Cover
* 10 3.5" Disks
* Three Manuals
* Operating System
* Built-in Speech Synthesis
* EXTRA 512K RAM
* Mouse Mat
* Dpaint II

DIAMOND MEGA 10 GAMES

Chess Player 2150, Datastorm, Dungeon Quest, E-Motion, Grand Monster Slam, Kid Gloves, Rick Dangerous, RVF Honda, Shufflepuck Cafe, Soccer + Joystick

ONLY **£309.00**

WITH

8833 MK II Colour Monitor ONLY **£475.00**

PACK 5

AMIGA 500 NINJA PACK INCORPORATING AMIGA 500 +

* Disk Storage Box
* 1Mb Disk Drive
* 4096 Colours
* Mouse
* T.V. Modulator
* Dust Cover
* 10 3.5" Disks
* Three Manuals
* Operating System
* Built-in Speech Synthesis
* EXTRA 512k RAM
* Mouse Mat
* Dpaint II

DIAMOND MEGA 10 GAMES

Golden Axe, Hard Drivin', Phobia, North & South, Silk Worm, Shockwave, Continental Circus, Turrican, X out, Ninja Warriors + Joystick

ONLY **£309.00**

WITH

8833 MK II Colour Monitor ONLY **£475.00**

PACK 6

EDUCATION PACK FROM DIAMOND

* AMIGA 500
* 512k RAM board
* Mouse mat
* Dust Cover
* Funschool

ONLY **£299.00**

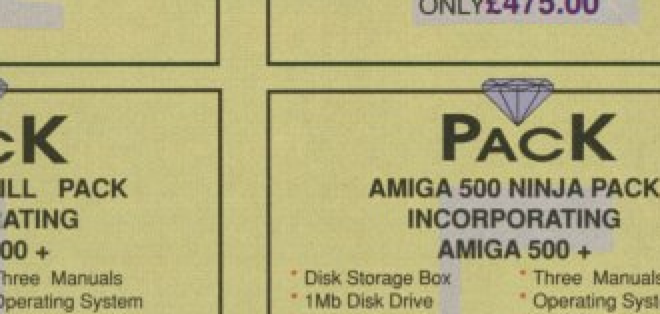
INSTRUCTIONAL VIDEOS

AMIGA MADE EASY part 1 ONLY **£13.00**

AMIGA MADE EASY part 2 ONLY **£13.00**

All prices exclude VAT

No. 1 FOR



Diamond Retail Outlets Around The United Kingdom

- Dorset ✆ 0202 716226
- Bristol ✆ 0272 693545
- Manchester ✆ 061 257 3999
- Southampton ✆ 0703 232777
- London ✆ 081 597 8851
- Warwickshire ✆ 0926 312155
- Edinburgh ✆ 031 554 3557

WANT A 2000? GOT A 500?

AMIGA POWER

SWAP IT FOR ONLY £299.00

GREAT AMIGA DEALS FROM DIAMOND

AMIGA 1500

A 1500 1Mb RAM, 3.5" floppy disk drive, base machine	£525.00
with 2x 3.5" floppy disks and software pack	£559.00
all above + Monitor	£735.00
with XT Bridgeboard	£835.00

INCREDIBLE PX OFFER
visit Mr. Diamond and discover what your A500 is worth in part exchange

XT Bridgeboard 5.25" floppy drive	£129.00
AT Bridgeboard with either 3.5" or 5.25" floppy drive	£499.00

AMIGA 3000

The NEW Commodore AMIGA

AMIGA 3000-16-40 16Mhz, 40Mb hard disk
P.O.A.

AMIGA 3000-25-40 25Mhz, 40 Mb hard disk
P.O.A.

AMIGA3000-25-100 25Mhz, 100Mb hard disk
P.O.A.

AMIGA 3000 4Mb RAM expansion
£299.00

This machine is a veritable workstation, which comes with Workbench 2.0 - The new Commodore Multi-tasking Operating System - It can run the normal video monitor or a multisync monitor without having to fit a flicker fixer. It can even run under UNIX. This is the machine to set the standard for professional use in the 1990's.

AMIGA 2000

If you have reached the limits of the A500 then take advantage of the **Diamond Part Exchange Upgrade Option.** Swap your 1Mb A500 for an A200 for **ONLY** £299.00

Mr. DIAMOND AMIGA 2000 PACK
A2000 Rev. B 48Mb Autobooting Hard Disk, 28ms average access ONLY £789.00
With Colour Stereo Monitor ONLY £959.00

A2000 base machine	P.O.A.
Ex-demo A2000	£399.00

PC XT & AT Compatibility for AMIGA

XT Bridgeboard 5.25" floppy drive	£129.00
AT Bridgeboard with either 3.5" or 5.25" floppy drive	£499.00

IVS TRUMPCARD for AMIGA 1500 & 2000

The IVS Trumpcard is the top selling SCSI hard drive controller. Representing the latest in technology directly from the USA, it will fit in either the A1500 or A2000. It is the only controller which will support IBM, Amiga and Apple MAC partitions on one hard disk. This allows you to run software for the three main hardware platforms in one machine. No more compatibility problems, only one computer can do this.

HARD DRIVE UNITS

ST157N-1	48Mb	28ms	£199.00
ST177N-1	60Mb	20ms	£239.00
ST1096N	83Mb	20ms	£285.00
ST296N	84Mb	28ms	£239.00
ST1126N	111Mb	15ms	£449.00
ST11262N	142Mb	15ms	£499.00
ST1201N	177Mb	15ms	£599.00
ST1239N	211Mb	15ms	£629.00
SYQUEST	44Mb	28ms removeable cartridge drive.	£539.00
IVS Trumpcard for above add			£99.00
Installation and formatting			£25.00

Memory Upgrades for your Amiga 1500 & 2000 with the SUPRA 8Mb RAM board
Add £69.00 for board

2Mb populated £59.00
4Mb populated £117.00
6Mb populated £175.00
8Mb populated £223.00

High Res
1024 x 768, 0.28 dot pitch
Multisync Monitor
£295.00

AMIGA
3.5" external Drive
£45.00

To get those flicker free high res modes, use the FLICKER FIXER video card. ONLY **£259.00**

Speed Up
your 1500, 2000, 3000 with a Co-processor Board
Phone for details

PHILIPS
8833 MkII colour monitor
only **£199**

CHIPS & DISKS

WE ONLY SELL NEW CHIPS

A590 Memory chips
0.5Mb **£15.00**
1.0Mb **£30.00**
2.0Mb **£59.00**
A590 2Mb Populated **£279.00**

8UP BOARD & CHIPS

Bare Board (0Mb) £69.00
add cost of RAM to your specification
2Mb +**£59.00**
4Mb +**£117.00**
6Mb +**£175.00**
8Mb +**£233.00**

DISKS

FOR A LIMITED PERIOD WE ARE SELLING HIGH QUALITY 3.5" SONY BULK DISKS AT ONLY **£0.30** EACH

MONITORS

ALL PHILIPS U.K. MONITORS HAVE 1 YEAR ON SITE GUARANTEE

PHILIPS 8833(U.K.)
Colour Monitor with stereo sound
Only **£199.00**

DIAMOND Multisync Monitor
Only**£295.00**

COMMODORE 1084/s
Only **£189.00**

COMMODORE 1084/SD Monitor
Only **£199.00**

NEC Colour Monitor
(for BBC, C64, Amstrad PPC & IBM PC)
Only **£131.00**

PRINTERS & RIBBONS

STAR LC200 COLOUR	£163.00
CITIZEN 124D	£162.00
OKIDATA LASER 400	£599.00
PHILIPS MNS 1432	£99.00
CITIZEN SWIFT 24	P.O.A.
WITH COLOUR	P.O.A.
PANASONIC KXP/1124	£P.O.A.
OKIMATE 20	£130.00
STAR LC MONO	£119.00
STAR KLC/24/10	£P.O.A.

RIBBONS	QUANTITY EACH 2	6	12
OKI 20 COLOUR	£7.00	£6.50	£6.20
OKI 20 BLACK	£6.60	£6.20	£6.00
PANASONIC KXP/1124	£7.50	£7.00	£6.50
KXP1080/1/2/3	£3.95	£3.80	£3.60
JUKI 6100	£1.75	£1.60	£1.50
M.TALLY MT80	£3.50	£2.70	£2.50
STAR LC10	£3.95	£3.70	£3.50
STAR LC10 COLOUR	£6.50	£6.00	£5.50
STAR LC24/10	£6.50	£5.90	£5.50
EPSON LX800	£2.50	£2.10	£1.90
AMSTRAD PMP4000	£3.85	£3.70	£3.40

MULTIMEDIA WITH AMIGA VISION

This is the program for showing your pictures, running your animations, playing your music and digitised dound all together. It will also control videodiscs, videotape machines as well as playing MIDI equipment. This is the ultimate presentation package.
Introductory Offer ONLY **£99.00**

VIDEO SECTION

PAINT		FRAMEGRAB	
Deluxe Paint III	£50.00	DigiView Gold 4.0	£75.00
Digipaint III	£50.00	Rombo Vidi	£69.00
Photon Paint II	£20.00	Markam	£375.00
Spritz	£3.00	Naksha Scanner	£85.00
Icon Paint	£3.00	Disney Animation Studio	£70.00
Comic Setter	£20.00		

AUDIO MUSIC AUDIO

All the latest and best audio and music packages from Mr. Diamond at the keenest prices

MusicX full version **£59.00**
Perfect Sound **£39.00**
Audio Engineer **£149.00**

LHC Microsales
121 Regents Street
Leamington Spa - Warks
TEL 0926 312155
FAX 0926 883432

▼ OPEN ON SUNDAYS ▼

Diamond Computers Ltd
144 Ferry Road
Edinburgh
Scotland
TEL 031 554 3557

▲ OPEN ON SUNDAYS ▲

Diamond Computers Ltd
1022 Stockport Road
Manchester
TEL 061 257 3999
FAX 061 257 3997

When Ordering Please Quote
AUI05

HOW TO ORDER

Simply telephone through your order, giving your Access or Visa card Number or send a cheque or postal order to your Local Dealer.
All prices exclude VAT unless otherwise stated.
Next Day Courier Service Delivery **£10.00**
Please allow 5 working days for cheque clearance.
Bankers drafts clear on the same day
All prices are correct at time of going to press but may change without notice.

THE DIAMOND PRICE PLEDGE

"In the extremely unlikely event that you are able to find a better price on any goods currently available through Diamond, then we will match that price; and on Commodore & Philips products we will not only match the price of our competitors, we will even give you £5.00 as well."

This does not apply to sales or special prices and only applies at the time of purchase.

Diamond Computers Ltd
84 Lodge Road
SOUTHAMPTON
TEL 0703 232777
FAX 0703 232679

Diamond Computers Ltd
406 Ashly Road
POOLE - Dorset
TEL 0202 716226
FAX

Diamond Computers Ltd
227 Filton Avenue
Bristol
TEL 0272 693545
FAX 0272 693223

LAN Computer Systems
1045 High Road
Chadwell Heath -
Romford
TEL 081 597 8851
FAX 081 590 8959

It's Amazing!
It's Radical!
It's the Rolling Ruler!

Two rulers for only £5.95

A complete drawing board in one simple unit.
With a rolling ruler you can draw:

★ Horizontal parallel lines
★ Vertical parallel lines
★ Perfect right angles with ease
★ Any other angles from 1° to 359°
★ Clever circles

Available in two sizes 22cm (8in) and 30cm (12in) this great offer gets you both rolling rulers for just £5.95 (RRP £9.99)

It's innovative design gives the new rolling ruler the ability to draw vertical and horizontal lines without lifting it off the paper, parallel lines, angles, circles, musical staves and graphs with ease, making it ideal for the home, the office, schools, workshops and 3D design work.

Reader offers

Please use the Order Form on Page 121

AMIGADOS:
A Dabhand Guide

Is a comprehensive guide to the Commodore Amiga's disc Operating System (Version 1.2 *and* 1.3). It provides a unique perspective on this powerful system in a way which will be welcomed by the beginner and the experd user alike.

Rather than simply reiterating the Amiga manual, this book takes a genuinely different approach to understanding and using the Amiga and contains a wealth of practical hands-on advice and hints and tips.

£14.95
AMIGA COMPUTING APPROVED READING

The many features of this book include:

- Full coverage of Amiga DOS 1.3 functions
- Filing with and without workbench
- The Amiga's hierarchical filing system
- Pathnames and Device names
- The Amiga's multitasking capabilities
- The AmigaDOS screen editor
- AmigaDOS commands
- Batch processing
- Amiga Error code descriptions
- How to create new systems discs
- Use of the RAM discs
- Using AmigaDOS with C

WHY LET YOUR FINANCES BE A WORRY?

Personal Finance Manager

FOR THE AMIGA

Personal Finance Manager provides an easy way of looking after your bank account, building society account, credit cards and so on. It's WORKBENCH interface allows transactions to be entered or altered as easily as filling out a form

Full mouse control of PFM's window environment means a really user friendly program. PFM for the Amiga appears and runs exactly the same as our top selling PFM program for the Atari ST.
Automatic Standing Orders means that regular payments are never forgotten, whilst the graphic display will help you manage your account more effectively.
Personal Finance Manager will even attempt to match your statements by automatically identifying transactions that haven't yet been cleared.

- *The number of entries is limited only by the size of the memory*
- *Full Workbench interface*
- *Account entries are automatically placed in date order*
- *Selectable date formats*
- *Automatic standing orders*
- *Auto balancing against statement*
- *Graphic analysis including: Balance plot Budget comparison. Spend pie charts*
- *Windows are moveable and re-sizeable*
- *Graphics are self-scaling to fit windows*
- *All windows can be displayed at the same time*
- *Account print option*
- *Full Multi tasking – allows multiple account access*

RRP PRICE £29.95 INC. VAT

OUR PRICE £24.95

MichTron®

POINT AND CLICK OR FIRE AWAY!

More top-class products at unbelievable knock-down prices

How about trying one of these great new joysticks from Dynamics? There's the Competition Pro Glo Green and the Competition Pro Extra. You'll have awesome fire power at your fingertips – both feature auto fire and slow motion, and both are fully microswitched. *(2 year guarantee)*

" Long been a favourite with many gamers...tough, sturdy and responsive" *ST Action, Feb, 91.*

Competition Pro Extra Joystick
RRP: £16.50
Our price: £13.95

Competition Pro Glo Green Joystick
RRP: £17.50
Our price: £14.95

Gasteiner Mouse

And when you've finished playing games, you won't do better than this mouse. It's a real winner! Replace that sluggish Amiga rodent with this elegant, high resolution Gasteiner product.

RRP: £26.95 **Our Price: £19.95**

Passing an exam . . . applying for a job . . . whatever you want to do in life you need to able to SPELL!

There's mounting alarm about the appalling standards of spelling among Britain's schoolchildren. MPs, teachers, parents and employers are all stressing the vital importance of being able to spell correctly.

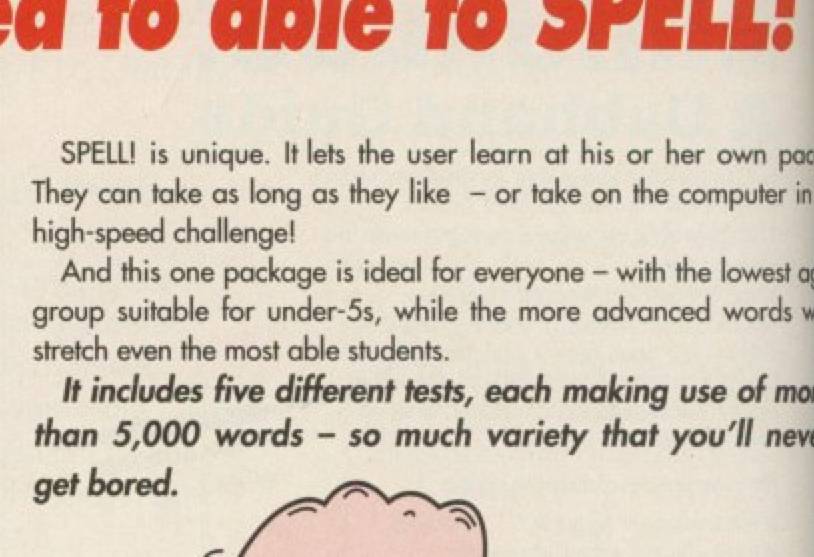
Yet most homes have what could be the ideal means of teaching spelling – the computer.

Instead of zapping aliens it could be turned into the best weapon of all to deal a body blow to bad spelling. With the help of a brilliant new software package that not only makes practising spelling painless but also loads of fun as well.

SPELL! is unique. It lets the user learn at his or her own pace. They can take as long as they like – or take on the computer in a high-speed challenge!

And this one package is ideal for everyone – with the lowest age group suitable for under-5s, while the more advanced words will stretch even the most able students.

It includes five different tests, each making use of more than 5,000 words – so much variety that you'll never get bored.



FIVE ways to improve your spelling

In a Flash: *Read the word as it flashes on the screen, then type it in. For practice runs, the word is left on the screen as it is typed.*

Rocket: *Hidden words have to be discovered in this hi-tech version of the old favourite Hangman. If they are guessed correctly the rocket will blast-off. Fail and all that's left is a load of scrap.*

Lunar Buggy: *Type fast for fun. The aim is to key in the word as it's pulled across the screen by the buggy. It has to be completed before the letters drop down a crater.*

All Mixed Up: *Jumbled letters have to be sorted out to find the scrambled word. To help beginners – and anyone else who is stuck – clues can be obtained at the press of a key.*

Conveyor Belt: *Words pass by on the screen and have to be remembered. Then they must be typed in – spelt correctly. This is a challenging test of both spelling and memory.*

All the programs have several options for extra flexibility – like a timer with on/off option to add that extra challenge.

In addition to using the 5,000 words provided, parents – or children – can create their own word lists for using with SPELL! This makes the package ideal for practising those hard-to-learn words, or for "Learn these spellings" homework.

- **5 DIFFERENT TESTS**
- **OVER 5,000 WORDS**
- **FOR AGES 5 TO 15**

SPELL! only costs £8.95. It is now available on disc and tape for six of the most popular home computers and can be ordered on the form below.

Please send me a *SPELL!* package for my computer
(Tick as appropriate)

I wish to pay by:
☐ Cheque or postal order payable to Database Publications
☐ Credit card No: Exp. date /

Name ....
Signed ....
Address ....
.... Post code ....
Daytime phone number in case of queries ....

AMC5

☐ Compact/Archi/Elk (3.5" disc) *3612*
☐ BBC/Elk (5.25" 40 T) *3610*
☐ BBC/Elk (5.25" 80 T) *3611*
☐ BBC/Elk (tape) *3617*
☐ Amiga (disc) *3614*
☐ ST (disc) *3613*
☐ PC (5.25") *3615*

TO: Database Direct, FREEPOST, Ellesmere Port, South Wirrall L65 3EB *No stamp need if posted in UK*

PHONE ORDERS: 051-357 1275

Expand and deliver

Thinking about expanding your Amiga? If so, then let Jason Holborn detail the options available

Home computer technology has advanced in leaps and bounds since good old Uncle Clive Sinclair unleashed his ZX80 onto the UK computer scene back in 1979.

In the space of little more than twelve years, home computers have developed to such an extent that the computers we have today bear only a passing resemblance to the computers of yesteryear.

Just thinking about it brings the memories flooding back. Back then, 16k was thought to be a heck of a lot of memory – indeed, I can remember a time when people used to doubt if you actually needed that much memory on a home computer! Then of course there was colour – if your computer could display more than the standard green on black, then it was looked upon as a pretty advanced piece of kit! As for sound, the odd digital bleep was about as sophisticated as things got.

Thankfully, those days are long gone. Now we're playing with a computer that has thousands of colours and the kind of sound capabilities that would have put a synthesiser to shame just a few years back. Even on the base machine, it offers almost ten times the amount of RAM available on the most famous 8-bit of them all, the evergreen Commodore C64.

Despite all this extra power, the Amiga is still held back in its basic incarnation. Fact is, a single floppy disk and 512k of memory just isn't enough unless you're happy to play the odd game (you'll even find that some games won't work under this very basic spec).

Radical changes

The key to getting the most from your Amiga is to expand it – that is, to add extra bits and pieces that will increase your machine's capabilities. You're probably already aware of such things as RAM expansions, external floppy drives and hard drives, but there's so much more to expansion than these fairly limited pieces of equipment. There's a vast range of more obscure devices that you can plug into your Amiga to push its power further than you'd previously ever thought possible – how does networking grab you?

Then of course there's such things as touch sensitive screens, 24-bit graphics cards, light pens, tape streamers, video processors and a whole host of other wondrous devices. Never has a single computer offered such a wide variety of expansion possibilities!

You'll be surprised what a difference a little bit of expansion hardware can make to your system. Even if you add just a half meg RAM expansion and a second floppy, you'll find your Amiga to be a much faster and smoother computer to work with.

When you start adding things like hard drives and processor accelerators, the difference is astounding! Even a fairly meagre amount of expansion will totally transform your Amiga – just ask anyone who has already taken the plunge!

In this and next month's issue of *Amiga Computing* we are providing you with what we think is the most comprehensive guide to expanding your Amiga ever written. This isn't a buyer's guide, so don't expect to find details of every hard drive and every RAM expansion available for the Amiga.

Instead, we'll be highlighting the kind of options available to you (and perhaps we'll point you in the right direction when it comes to making the right buying decision).

It's then up to you to find the appropriate equipment – a quick scan through the ads within Amiga Computing will usually be all that is needed.

Flexible friend

Choosing what hardware to buy is entirely up to you, but there are a couple of extra bits and pieces that a basic Amiga 500 is crying out for, so these are a good place to start. If you play alot of games, then an external floppy disk drive should be your first purchase – quite a few more recent games come on two, sometimes even three diskettes, so you can save yourself a lot of the hassles associated with constant diskswapping with an outlay of little more than £50.

If you use your Amiga seriously, then an extra drive will prove to be an absolute must, especially if you're a CLI hacker. AmigaDOS is totally transformed by the addition of an extra drive – indeed, it's almost friendly! (OK, perhaps I shouldn't go quite that far).

Once you've strapped on an external drive, your next purchase should undoubtedly be a ram expansion.

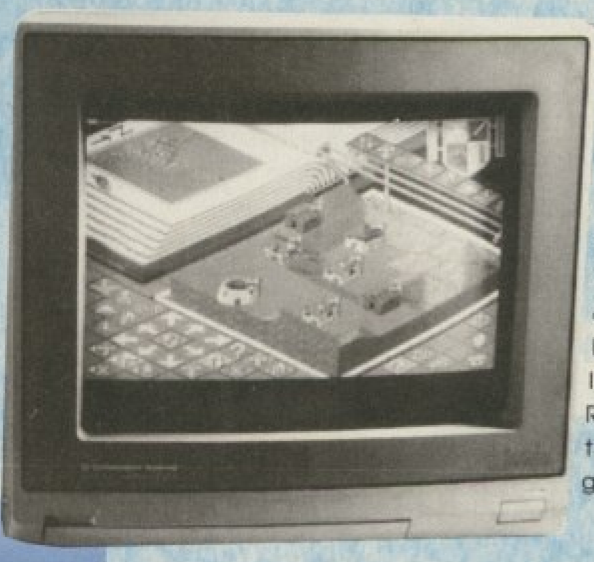
Most A500 users go for a half meg upgrade, but it's worth going for a larger board just for the extra room it creates – you may think a megabyte sounds like a lot of memory, but you'd be surprised how quickly the Amiga will use it up! A half meg ram card can be picked up for as little as £35 these days, so there's no excuse for not taking the plunge.

The vast majority of games don't really need the extra ram, but more and more developers are producing games that do take advantage of expansion memory.

This usually takes the form of a few extra sampled effects, better music and perhaps even a few extra game options. Some games actually require at least a megabyte to run (Dungeon Master, for example), and it seems certain that many more will be released in the future.

Screen scene

Once you've got these two basic add-ons, your Amiga will be a far more useable system, but that's no reason to stop there. A worthwhile upgrade for anyone who uses their Amiga for anything other than games is a colour monitor. Commodore's own 1084 provides a pretty decent display, but it is rather expensive for what it has to offer. The Amiga boasts both analog and digital RGB output, so there's a very good chance



just about any colour monitor can be wired up (although it's best to get a qualified electrician to do the neccessary work).

Mousey matters

The Amiga is very heavily mouse-based, but that doesn't mean that you have to stick with the mouse supplied with your computer. There are a fair number of alternatives available that will do exactly the same job without the problems associated with Commodore's rodent (clogging rollers etc).

Indeed, some are actually a much better bet than a mouse because they have been specifically designed with a particular application in mind.

One such application that has earned more than its fair share of attention is that of Amiga graphics. As a result, Amiga artists are positively spoilt for choice when it comes to choosing an alternative input device. By far the most popular is the touch tablet, which is basically a flat, pressure sensitive pad. Most touch tablets also come complete with some kind of pen or stylus, which is used to 'draw' onto the pad. What's so great about these tablets is that you can place a piece of paper on top of the pad and literally trace artwork directly into your Amiga.

Another alternative is the light pen, which is a device which allows you to draw by pressing the pen directly against your monitor screen.

This has the advantage of being closer to the conventional pen and paper than any other device, but they tend to be rather low resolution. Whilst they're great for the kids, they're far from ideal if you're after high precision equipment.

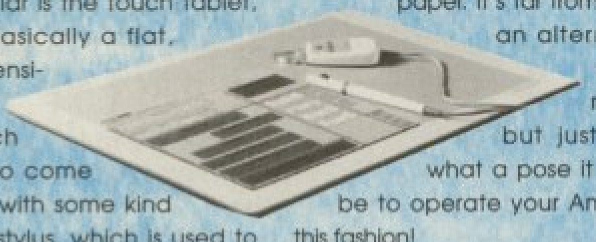
Another disadvantage of the mouse is the amount of free space that it requires on your desktop. A better bet is perhaps the trackball, which is basically and upside-down mouse. Like the mouse, the trackerball uses a rollerball but, unlike the mouse, you move the ball directly with your fingers. Apart from the obvious benefits for gaming (Marble Madness is great with a trackerball!), these are ideal for musicians use their Amigas live.

Moving still further away from the mouse is the Touch Screen, a device which is still very much in its infancy on the Amiga. You've probably seen them used on 'point of sales' systems – instead of having to click on gadgets with the mouse, you simply press your finger against the screen to select the gadget your require.

These are perhaps rather too specialist at the moment, but they'll prove to be an all-important weapon in the Amiga's multimedia arsenal.

Finally, a company in the States have just released a bar code reading system for the Amiga which allows you to assign different AmigaDOS commands to barcodes.

You can create your own barcodes using the bundled software and then dump them out onto paper. It's far from being an alternative to the mouse, but just think what a pose it would be to operate your Amiga in this fashion!



Sound advice

If you're interested in all things musical, then there's a healthy selection of associated gadgets and widgets that will fuel your interest. First among these is the sound sampler, which will allow you to 'digitise' a sound from just about any audio source (CD players, walkmans etc) and then edit it on your Amiga.

At the moment, all Amiga sound samplers are 8-bit devices, but several companies have announced their intention to produce studio quality 16-bit samplers which will make the Amiga a viable alternative to dedicated samplers such as those produced by industry heavyweights Akai and Roland.

Samplers can be alot of fun, but they also have a serious use. If you enjoy tinkering with music packages such as Sound Tracker, Deluxe Music or even Music-X, you can use a sampler to grab instrument samples from your favourite records.

If you're lucky enough to own a synthesiser, then your next purchase should undoubtedly be a MIDI interface. MIDI interfaces are very cheap little devices, but they can totally transform your music setup. With the right software, a MIDI interface will allow you to directly control a network of MIDI-compatible musical instruments

Speed freak

The Amiga is far from being a slouch where raw processing speed is concerned, but there are still times when things slow down to an almost unbearable rate.

You'll notice this especially if you use your Amiga for heavily processor intensive applications such as CAD, DTP and ray tracing, but most applications would also benefit from an extra spurt of speed.

The solution lies in a processor accelerator card, which basically replaces the central processor inside your Amiga with a much faster unit. To make things really burn, most processor accelerators also provide space for a maths co-processor, a dedicated number-crunching chip that can outrun even the fastest processor.

Most processor accelerators are based around either the Motorola 68020 or the '030 processors with either the 68881 or 68882 maths co-processors, although some cheaper processor accelerators use a faster version of the standard 68000 (AdSpeed, for example).

Installing a processor accelerator is only half the equation, however. If you want to make the most of your new acquisition then it's worthwhile fitting your Amiga with high speed 32-bit ram.

32-bit ram chips allow both the '020 and '030 processors to run at full speed (both as true 32-bit processors). Once again, you'll find that the vast majority of '020 and '030 cards provide space for at least 2 Mbytes of 32-bit RAM.

Visual delights

Whether you're into DTP, animation or just art for art's sake, a video digitiser is a worth while investment. A video digitiser is a great way of obtaining quality artwork without having to mess around with DPaint. Even for the more talented users amongst you, a video digitiser will allow you to get the artwork you need in a fraction of the time it would take if you tried knocking it up yourself.

Amiga video digitisers basically come in two flavours – realtime colour and not so realtime colour (sorry). With a realtime colour digitiser, you can grab colour images directly from a composite video source. These are undoubtedly the ideal choice, but you can expect to pay through the nose for such a device.

A more affordable solution is a digitiser like Rombo's VIDI Amiga. Although it will grab images in realtime, they are mono only. If you wish to grab in colour from a pre-recorded video source, you'll need to invest in a RGB splitter, a clever little device that splits a composite video signal into its red, green and blue components. Unfortunately, the source tape has to be paused during digitising, which can cause problems if your pause facility produces anything short of a rock steady display.

For grabbing in colour from a 'live' video source, cheaper digitisers use a system of red, green and blue coloured perspex filters that must be held infront of your video camera. DigiView made this rather quirky method of digitising famous, but it can be a real pain in the butt unless you've got a top quality mono video camera and good lighting.

Scanners are also a great way of obtaining artwork. Until quite recently, they tended to be mono only, but it's now possible to pick up a full colour scanner for just £600 (the Sharp JX-100). This very clever device is used extensively on *Amiga Computing* to grab many of the images within these pages, so there's no greater recommendation than that!

NEXT MONTH: Modems, genlocks, hard disks and more

AMIGA COMPUTING

NEWSAGENTS ORDER

Please reserve a copy of Amiga Computing magazine every month until further notice

☐ I will collect
☐ I would like it delivered to my home

Name..

Address..

....

.... Postcode ....

Note to Newsagent: Amiga Computing should be available from your local wholesaler. If not contact Carolyn Wood on 0625 878888

Interactive Rescue

Printer out of puff? Computer cracking up? We are here to help!

Write to Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP

Memory loss

I recently purchased an A502 512Kb RAM expansion board at the 16-bit show in January. It has a battery backed up clock and a switch, but I cannot get it to work. The extra memory seems not to want to be used. Can you help?

M Arthur, Leighton Buzzard

Try booting with the switch in both positions, and if you still don't get the extra memory, give the board a good shove.

It's often the case that a new Amiga's trapdoor interface can be extremely stiff, and many people are nervous of applying too much brute force to their expansion boards. Make sure the board is pushed in as much as possible.

If the Amiga persists in thinking it's a half meg machine, return the board to the retailer or manufacturer for replacement.

Tony revisited

Your response to Tony Williams, a 'Confused Upgrader' in the March Interactive Rescue column, stated that an Amiga 2000 hard disk always requires a small AmigaDOS partition to mount the Fast File System(FFS).

This is just not the case. I suggest you run Fixdisk 1.2 as supplied on your own coverdisk on a A2091-40 and you will see the following info displayed

```
:DH0: handler = SCSI.device [FFS]
```

The confusion perhaps arises from the fact that Commodore's original A2090 hard drive controller didn't auto-boot, requiring a floppy to start the boot and then mount it.

The improved A2090/A, however, WILL auto-boot under Kickstart 1.3.

As both the A2090 and A2090/A were available before the introduction of FFS, they required the Amiga to boot into a standard AmigaDOS file system partition before mounting a FFS partition.

In response to the FFS, third party manufacturers began to introduce SCSI controllers which would auto-boot and auto-mount directly into a FFS partition.

These controllers did not require a standard AmigaDOS partition to be mounted first, and allowed all disk space to be formatted under FFS.

The A2091 does not require any mountlist entry or any details in the expansion drawer, as under Kickstart 1.3 an Automount flag is stored on the first two cylinders of the hard disk.

Gordon MacKinnon, Belfast

It's a fair cop! Yes, our reply to Tony's letter wasn't what it should've been. You know how it is – Friday afternoon, dog's just died, gas bill pending, five or six black coffees too many. Sigh.

As for FixDisk, it has the annoying habit of identifying all hard drives with the (FFS) label. I have a hard drive which is entirely formatted in the standard AmigaDOS filing system, and FixDisk insists on calling it a FFS device. Bit of a bug there, methinks.

Oh, and by the way – the problem with the recoverable RAM drive and RAD: on machines with a Fatter Agnus and 1Mb of RAM is cured when you use the 1Mb RAM patch option.

Change the SETPATCH in your startup-sequence to SETPATCH-r and RRD: should work as well as before. I'm just off to clean the WC with this toothbrush the Ed just gave me..

Not an A590 fan?

I would like to know of any hardware project which I could use to disable my A590 hard drive so that any long sessions of game playing the drive isn't active. Naturally it would be handy if the extra RAM was still accessible.

With the drive connected the Amiga won't power up if the drive transformer is switched off, so the only option is to unplug the drive-from the computer, thus adding wear and tear to the edge connector.

The drive can be stopped from auto-booting by use of the rear DIP switch, but I would like to have total silence.

T N Wells, Ipswich

One way of silencing your A590 is to run it with the cover off, thus allowing you to disconnect the fan while keeping the drive cool.

With the cover off, you could also completely disable the drive by disconnecting the ribbon cable between it and the motherboard.

This might sound dangerous, but we've had it recommended as an option by someone whose A590 has seldom been used fully cased. As you say elsewhere in the letter that your warranty has expired, you wouldn't be risking financial ruin by giving it a try.

You might like to try putting a plastic guard over the top of the open drive, leaving enough airway to cool it while stopping hands straying into it.

I had a quick look at garden-style wire mesh with thick plastic coating, which bends easily into a strong 'fireguard'.

With this firmly glued to the A590, or hooked under the base, your drive is if anything safer than in its original plastic case – except for the dreaded coffee menace, of course.

Another method of stopping an auto-boot while retaining all the extra RAM is to buy a switchable Kickstart 1.2/1.3 from AmigaDirect on 081-891 6704.

With this you could start up in Kickstart from which your drive won't auto-boot, and still have access to the extra 2Mb. You can always MOUNT the drive afterwards if you want it or re-boot with the Kickstart switched to 1.3

A3000 inquiries

Please give me some answers on the A3000 as extracting technical help from Commodore seems to be all but impossible. Here goes...

- Is it true that the Fast File System can be used on floppies under Workbench 2.0?
- What do all the parameters for the CPU command do?
- Kickstart 2.0 is currently loaded into Fast RAM, occupying0.5Mb, but will apparently be available on ROM at a later date. With tricks like fast 32-bit RAM and ROM shadowing,

would the ROM upgrade be faster or more efficient?

- If Fast RAM is expanded to 4Mb, can the existing 1Mb shipped with the machine be moved across to Chip RAM?
- What's the difference between DIP and ZIP chips, and what is Static Column Memory?
- Can bridgeboards such as the A2088 designed for the B2000 be fitted to the A3000?

Robin Harley, Shoreham-by-Sea

In answer to your questions ...

● Yes, the Fast File System WILL work with floppies under Workbench 2.0. Yum, yum.

● The CPU command has parameters to control the management of the 68030's on-board data and memory caches, the enabling of burst mode, the copying of ROM based Kickstarts into Fast RAM, and a check on the Floating Point Unit used.

To list them all here would take up too much space, so all I can do is recommend Mastering AmigaDOS 2, by Bruce Smith and Mark Smiddy, which contains the best guide to Workbench 2.0 I've seen so far. The publisher, Bruce Smith Books, can be reached at (0727) 41243.

● The best performance is gained by copying Kickstart into 32-bit memory, so you might as well stick to hard drive-based Kickstart, which also has the advantage of being easier to upgrade.

● Yes, you can move that 1Mb over.

● ZIP stands for ZigZag Inline Packet. DIP stands for Dual Inline Packet. DIP chips are the traditional style RAM chips with pins on either side. ZIP chips have all their pins on one edge and stand up vertically, thus saving space on the motherboard.

If you closely examine our piccies of the CSA Mega Midget Racer in last month's cover story you'll see that the Mega Memory board on the right contains a row of ZIP chips looking rather like a row of dominoes (except they don't have white spots and a row of dominoes couldn't store 2Mb RAM).

● As to the bridgeboards, theoretically yes, although the 5.25" drive would have to be mounted externally or replaced with an internal 3.5" drive.

The A3000 has two AT-compatible bus slots and should be OK with a bridgeboard, though we haven't tried it ourselves.

Drive glutton

I have an A500 with A590 and extra 2Mb. A few months ago I bought a Fujitsu 86Mb hard drive from Althamera Systems and have had it installed in my A590 casing. It's a nice fast drive and has given me no problems.

However, my old A590 mechanism is now not in use. Is it possible to connect this internally/externally to my A500? I am a glutton for disk space.

Peter Colls, Walsall

Glutton's not the word! You mean you've filled up the 86Mb already?

Seriously, though, you don't have too many options open. As far as I know, there are no third party A590 cases available, so you might have to beg Commodore for one. The power supply is part number 312639-02 (250V/74W), and you'd have to use a similarly rated unit if you didn't buy the CBM offering. With a power supply you might try rigging up a casing of your own, but I wouldn't recommend it.

The best third-party option is perhaps the A1500 unit. With the A590 mounting kit and DUC board you can re-box your A500 and then mount your A590 internally.

If you think the extra storage would be worth the prohibitive expense contact A1500 Ltd on 071-637 2281.

Loan Ranger v Desperate Dan

I bought my Amiga in mid December and have been delighted with it. Unfortunately, I have been operating with a portable television until recently I was loaned a monitor. This is where my dilemma started.

The monitor is a Commodore Ranger 15, serial number 716470, part number 8800-15. It has two inputs, a 9-pin D-type connector labelled RGB TTL, and a 15-pin labelled RGB Analog.

I wish to use the analog input, but have been unable to find anyone who can supply me with a ready made lead or give me the wiring details for one. I'm desperately in need of some help.

Daniel Burns, Thundersley

The monitor in question is a 15" multisync designed for use with a flicker fixer or A2320 display enhancer card, and as such is not normally connected to a standard Amiga video connector.

A2320 cards cost about £287 these days and can be had at this price from several of our advertisers. Try Calco Software on 081-546 7256. You should find little trouble in finding a suitable off-the-shelf lead for this connection.

If you insist on using the Ranger without a flicker fixer – and this is a waste of a multisync monitor – you'll have to make one of your own.

Fortunately the Ranger 15", unlike its 21" big brother, will sync all the way down to the 15.6KHz video output frequency obtained from the Amiga 23-pin video connector. Some multi-sync monitors will only output at frequencies above 30KHz.

You'll find the pin-outs for the Ranger's 15-pin socket on page 15 of the monitor's manual, and the pin-outs for the Amiga video socket on page A-6 of the user's manual.

As far as we can see the pin connections from Amiga to monitor are 3 to 1, 4 to 3, 5 to 5, 11 to 13 AND 14, 12 to 15. Then 16 up to and including 20 should be joined and go to 2, 4, 6, and 7 on the Ranger.

Before you attempt this, ask yourself whether it's worth wasting a multisync monitor on a non-interlaced standard Amiga output.

If there's any hope of keeping the thing on a long term basis, run out immediately and buy a flicker fixer!

Transplanting graphics

I would like to put the Amiga's brilliant graphics on an Archimedes (*A what? - Ed*) to utilise laser and inkjet printers at school.

I have been told by my IT teacher that all I need do is change a disk to PC format and output the IFF files to that. The Archimedes, using a PC emulator, will then be able to display them.

However, according to the PC Format docs on the Extras 1.2 disk, I need a 5.25" floppy drive which I do not have. Is there a 3.5" disk PC formatter available anywhere?

Andrew Skerry, Salisbury

If you don't have a Commodore A1020 5.25" floppy, you can use a PDPC program such as MessyDos, or go for something like CrossDos, which is a commercial product.

Either will write to the Amiga's own 3.5" drives as if they were PC drives, and will format 3.5" disks to PC format, which should be useable with an Archimedes running its own PC disk reading software.

CrossDos is available from several of our advertisers, including ARK on 0983 79496, and MessyDos is available from all decent PDlibraries. Just make sure your IT teacher has a utility which allows the Archimedes to read and convert Amiga IFF files to a format it can display.

Breakdown

I am using an A500 with extra 512Kb memory and a Pace Linnet Intelligent Modem. I am using Access software with the baud rate set at 300, parity at 0, data length 8 bits, stop bits 1, and all other settings I have left at default (although I have experimented with different settings).

I am trying to access various bulletin boards whose numbers I have obtained from your mag over the months. About 60% of the time I get NO CARRIER, but the other 40% I manage to get a connection. However, all I seem to get on screen is garbage and seemingly randomly generated characters.

It would be a great help if you could list the settings I will need on Access.

Ken Wooffindin, Leeds.

You are using 8-N-1 defaults – the most common – so sounds to me as if you're trying to access at the wrong speed. If you connect to a BB at 1200 baud, and it tries to talk to you at 2400 baud, you'll get what appears to be a mixture of Greek and Cyrillic characters on the screen.

Try a bulletin board which supports the most settings, then play around with your baud rate until you get a clean connection. You might also keep an eye on our comms column – Eddie will be taking a close look at the first few difficult steps into comms.

Our thanks to Jolyon Ralph, Alan Emery, and Commodore Technical Support for their help with this month's letters

amiga almanac

Desktop Video

Jason Holborn peers through the viewfinder to find the kind of software you need to get started in DTV

I've had quite a few readers contact me after reading the cover feature on Desktop Video in the January issue of *Amiga Computing*.

Although the article discussed most of the options for getting into desktop video, quite a few of you still seemed unsure about the kind of software and hardware to go for.

To help you sort it all out, here's a quick run down of what I consider to be the minimum requirements.

THE GENLOCK: With so many now available choosing a genlock is probably the most difficult buying decision you're likely to encounter.

Which you pick depends entirely upon the video formats you have at your disposal. If you have nothing more than a couple of standard VHS decks there's little point in paying out for a S-VHS compatible genlock unless you intend upgrading your decks at a future date.

Similarly, if you have access to higher resolution video devices, a standard composite genlock will not take advantage of the higher picture quality these decks deliver.

The cheapest genlock available is MiniGen from ASAP, but I wouldn't really recommend it to anyone unless they are completely poverty stricken. If you can afford it, it's well worth spending a few pounds more on a unit which will almost certainly produce higher quality results. Worth checking out is the Rendale 8802 which offers near broadcast quality for around £260.

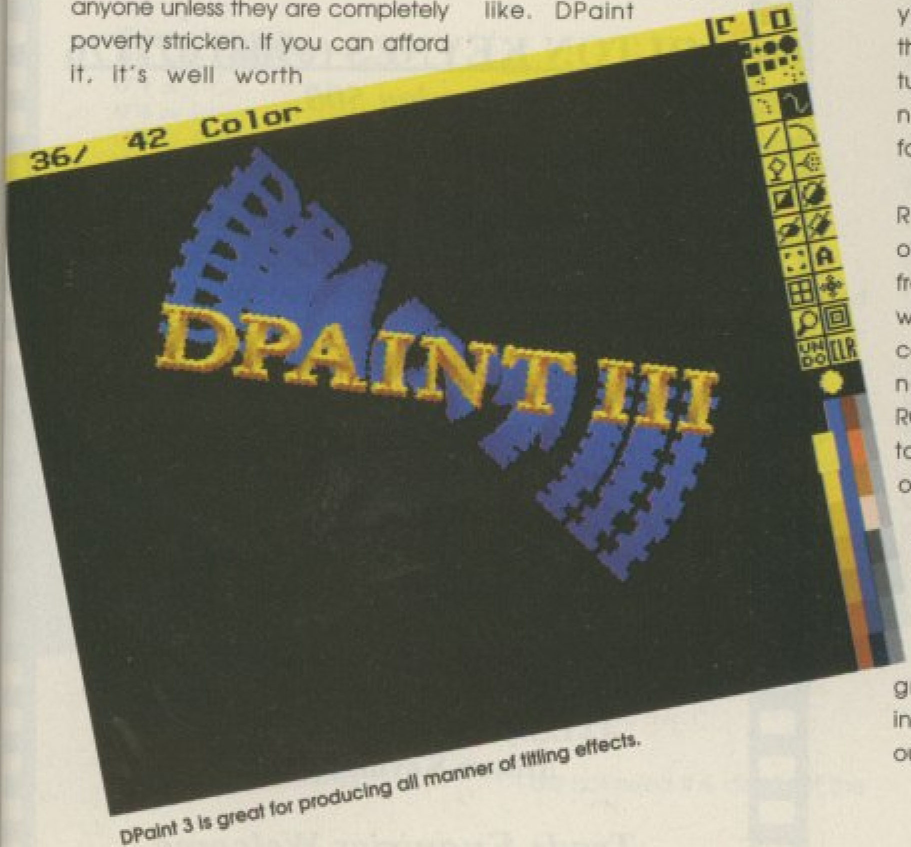
THE SOFTWARE: Once again, the software you choose depends entirely upon your particular needs. If you just want to add titles to your home videos of granny at the beach, all you need is a titling package.

A good one is the Big Alternative Scroller, which is available from Alternative Image on 0533 440041. For just £50 you get 20 high resolution fonts which can be smoothly scrolled about the screen. It's not in the same league as the likes of Broadcast Titler 2, but then it is considerably cheaper!

If I had to choose just two packages for my desktop video work they would undoubtedly have to be EA's Deluxe Paint 3 and Zuma's TV Text Professional.

TV Text allows you to produce stunning titles from standard Amiga bitmapped fonts, while DPaint is great for producing logos and other artwork.

Not only that, but its powerful animation facilities allow you to produce all manner of flash effects including spinning logos and the like. DPaint also fully supports overscanning, which is all-important for video work.



DPaint 3 is great for producing all manner of titling effects.

ACTing up again!

If you thought VE-1 Video Enhancer from ACT Electronics' (0637 881319) was something pretty special (see last month's issue for more), then you're in for a pleasant surprise. They've just launched a feature-packed audio/video effects processor which offers unrivalled video processing power for just £350.

Catchily named the AVP-MK3, the unit was actually designed with Camcorder owners in mind. However, as ACT like to point out, it'll prove to be just as useful to Amiga video enthusiasts. Here's what it has to offer:

COMPATIBILITY: Whether you're using two home VHS recorders or the latest Hi8 decks, the AVP-MK3 is built with the future in mind. It is fully compatible with VHS, VHSC, 8mm, BETA, U-MATIC, S-VHS, S-VHSC and Hi8.

If you're using S-VHS, S-VHSC or Hi8, the AVP-MK3 allows you to take full advantage of the high definition settings, then edit on to a standard VCR, therefore allowing for the highest possible results from your video setup. As a result, there's no need to suffer loss of picture quality just because your destination deck isn't of the same format as your source.

A built-in Composite + Y/C to RGB Converter allows you to obtain the maximum performance from high resolution video formats without having to fork out for a S-compatible TV set simply by channeling the output into any RGB-compatible TV set. According to ACT, most modern TV sets now offer this feature.

SIGNAL PROCESSING: The AVP-MK3 boasts comprehensive RGB colour correction facilities which allow you to adjust the red, green and blue content of the incoming video signal simultaneously.

You can also adjust the brightness, contrast and colour saturation to the levels that you require. To help you achieve the optimum settings, the AVP has a video level indicator which changes colour when these settings are achieved.

Obviously you're not restricted to these settings, but they provide a useful method of achieving the best possible results with a minimal amount of knob-twiddling.

Extra controls include Luminance and Chrominance inversion switches which produce a sort of photographic negative image effect. Alternatively, these settings could be used to allow real photographic negatives to be recorded to video tape in their true colours.

Just like their VE-1 enhancer, the AVP features sync pulse restoration hardware which helps to reduce the loss of quality associated with video signals.

WIPES AND FADES: The AVP-MK3 employs ACT's own custom IWEC technology which allows you to continuously vary the edge effect on any chosen wipe pattern, giving infinite control over the range of effects available.

ACT have built in 30 base wipe patterns which are controlled from the front panel using the unit's select switches. You can access any combination of horizontal, vertical or diagonal wipes and even modify the supplied wipes using the AVP's IWEC controls.

AUDIO MIXING: The audio section of the AVP-MK3 offers a comprehensive range of controls which allow you to work on the audio side of your video productions. Its three channel audio mixer consists of a microphone level control and two line level controls for mixing music and even voice overs with your existing video sound track.

Both bass and treble can be altered, and an extra headphone socket allows you to monitor your audio mix during the editing process.

A visual display of the sound output levels are provided via twin LED VU meters, and a master audio fader allows you to adjust the volume of the mixed audio signal.

Machine Code

With a little effort, Assembler programmers can benefit from useful files used by the C Brigade – Margaret Stanger tells you how

The story so far:

Lucky C programmers use the Amiga 'include' files to interpret the system data structures. It may not be generally known that these goodies are also available to Assembler programmers after only a very little extra hassle.

Now read on.....

Window on the world

Before a Window is opened a parameter block – or structure – named New Window is created for it and stashed away in memory.

The variables in a structure are always in a standard order, the offset of the BlockPen (say) from the base Window address is always the same:

```
STRUCTURE(T) NewWindow,0
WORD nw_LeftEdge
WORD nw_TopEdge
WORD nw_Width
WORD nw_Height
BYTE nw_DetailPen
BYTE nw_BlockPen
ULONG nw_IDCMPFlags
LONG nw_Flags
APTR nw_FirstGadget
APTR nw_CheckMark
APTR nw_Title
APTR nw_Screen
APTR nw_BitMap
WORD nw_MinWidth
WORD nw_MinHeight
WORD nw_MaxWidth
WORD nw_MaxHeight
WORD nw_Type
LABEL nw_SIZE
```

The structure member nw_BlockPen gives its offset from the base address of the NewWindow structure. The colour of the BlockPen – I hate capital letters in the middle of a word! – could be changed to 3 (say) using Assembler's relative addressing:

```
lea      TheNewWindow,a0
move.b   #3,nw_BlockPen(a0)
```

In theory

There is a disc file available with details of all the intuition structures, together with the numerical value of any flags used.

This file, intuition/intuition.i, can be included in the source code by a statement at the beginning of the code. There is a small file called exec/types.i that is included first to interpret the structures in the other include files. It tells us that a BYTE increases the offset by one byte, and a WORD by two bytes and so on.

```
INCLUDE  "exec/types.i"
INCLUDE  "intuition/intuition.i"
```

That would have been too easy.

In practice

Unfortunately my assembler used on an A500 did not have enough workspace for the necessary include/intuition file, so I picked out the structures and flags I needed and added them to the source code.

I included "exec/exec.i" so that the computer could make sense of the reference to MP_SIGBIT in the Window's UserPort.

```
INCLUDE  "exec/types.i"
INCLUDE  "exec/exec.i"
```

I did not need the details of the Screen or NewScreen structures as I was not referring to any of the structure members. I did need the data itself, with the correct values to open the screen.

```
TheNewScreen:
   dc.w 0   ;LeftEdge
   dc.w 0   ;TopEdge
   dc.w 320 ;Width
   dc.w 200 ;Height
   dc.w 3   ;Depth
   dc.b 1   ;DetailPen
   dc.b 3   ;BlockPen
   dc.w 0   ;display modes
   dc.w CUSTOMSCREEN   ;screen type
   dc.l 0   ;pointer to custom font
structure
   dc.l screentitle    ;pointer to
screen title
   dc.l 0      ;pointer to screen
gadgets
   dc.l 0      ;pointer to custom bitmap
```

I needed the data for the NewWindow, and the data structures for Window and NewWindow. For the computer to interpret these I had to explain the flags to it

```
.; Ñ- IDCMP flag used
CLOSEWINDOW equu   $00000200   ;ÑÑ-
Window flags used
WINDOWSIZING    equ $0001
WINDOWDRAG      equ $0002
WINDOWDEPTH     equ $0004
WINDOWCLOSE     equ $0008
SIZEBRIGHT      equ $0010
;ÑÑ-Screen flag used
CUSTOMSCREEN    equ   $000F
```

Any structures or flags could be defined in the source code or in header files as long as space permits. There is room for creativity!

The include files directory was added to the path:

```
assign INCLUDE:
Lattice_C_5.0.5:Assembler_Headers
```

and the option 'i' was used during the assembly.

```
asm -iAssembler_Headers/  demo
blink demo.o to demo  library
"lib/amiga.lib"
```

Up and running

The easiest way to open a screen is to use the Intuition Library routine OpenScreen, with a pointer to a NewScreen structure (short!) which contains some of the values and pointers for the screen.

```
move.l   intuitionbase,a6
 jsr      _LVOOpenScreen(a6)  movem.l
d0,customscreen
beq      abort
```

I used the same New Window structure for each of the three windows,and changed the details slightly once I had the address of each Windowstructure.

```
lea      TheNewWindow,a0       move.l
d0,nw_Screen(a0)
jsr      _LVOOpenWindow(a6)    move.l
d0,thiswindow
beq      abort
```

The system flags are set for most of the system gadgets, and Intuition takes care of their activities.

The IDCMP CLOSEWINDOW flag is deactivated on the second imaginatively named window, the title is changed and the window is slowly moved down.

The third window is opened, modified and moved in a similar way. These windows can all be dragged, sized and made active. The program only exits when the first window is closed with its close gadget.

The program uses a few of the routines from the Intuition library, but many more are available.

In the CODECLINIC directory of the March Amiga Comuting support disc I have included a list of intuition library routines. For each one I have listed the input, input registers, output (where applicable) and a short description.

Music

This month Jason Holborn puts Digigram's flagship sequencer, Studio 24, through its paces

In the space of little more than a year and a half the Amiga sequencer market has virtually exploded, with no fewer than 15 different systems now generally available.

Looking at products like Music-X and Master Tracks, it seems almost inconceivable that the Amiga was once considered as something of a musical dodo.

Joining the ranks of such fine products as Music-X is Studio 24, a MIDI sequencing system from French music software publishing company Digigram.

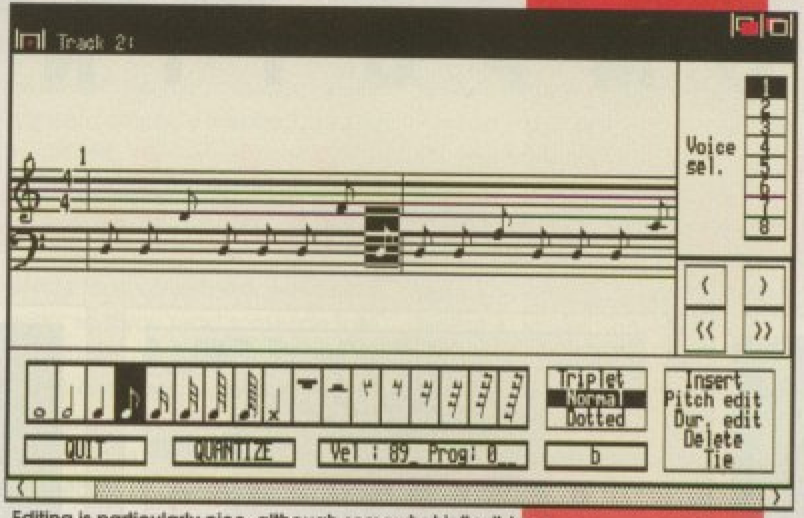
They have been in the biz for a number of years now, but their wares have been previously unavailable to we UK musos. But now, in the spirit of 1992 and all that jazz, UK distribution has been picked up by GFA Data Media, a company probably better known to Amiga users for its superb programming system GFA BASIC.

As reported previously in AC, GFA have taken on the distribution of a number of Digigram music products. These include Track 24é and Studio 24 – both of which are sequencers – Big Band and a powerful music scoring package called ProScore.

Big Band and ProScore were unavailable at the time of going to press, but you can expect a full review very soon.

As the name suggests, Studio 24 is a 24 track sequencer. It arrives in a vacumn-moulded plastic case with a single program disk, manual and a selection of quick reference cards.

These unique cards allow you to look up many of the program's major features without the hassle of flicking through a manual, which is certainly a good idea.



Editing is particularly nice, although somewhat inflexible

Key disk protection

Unlike most sequencers these days, Studio 24 is copy protected. In true Dr.T fashion, this takes the form of a key disk system which requires the original program disk to be inserted every time the program is loaded, even if you install it on a hard disk! I think such a system is a real pain, but there you have it.

Once loaded, you'll be greeted by the first of Studio 24's two screens. It contains the now familiar tape transport controls that run as a strip of gadgets along the bottom of the screen.

These are pretty bog standard - Play, Record, Fast Forward, Rewind and so on, but surprisingly there is no Pause button, which is a strange omission.

Above are the track controls that stretch completely from one side of the screen to the other. Each track has its own set of three gadgets which are used to either mute, solo – which effectively mutes all other tracks – or select it for recording.

You can pick any one of the first 22 tracks for normal recording, but tracks 23 and 24 have their own special functions. Studio 24 calls track 23 its Chord Track which, as the name suggests, is set aside specifically for chords.

When you record chords on to this track, Studio 24 will recognise and display them complete with their correct name – C Sharp Major or whatever. If you're not too hot with chords, the chord track also allows you to enter them with a single mouse click.

Track 24 is a Melody Track which can contain only monophonic sequences. I can't see any real point in having it when any one of the first 22 could do the job equally well.

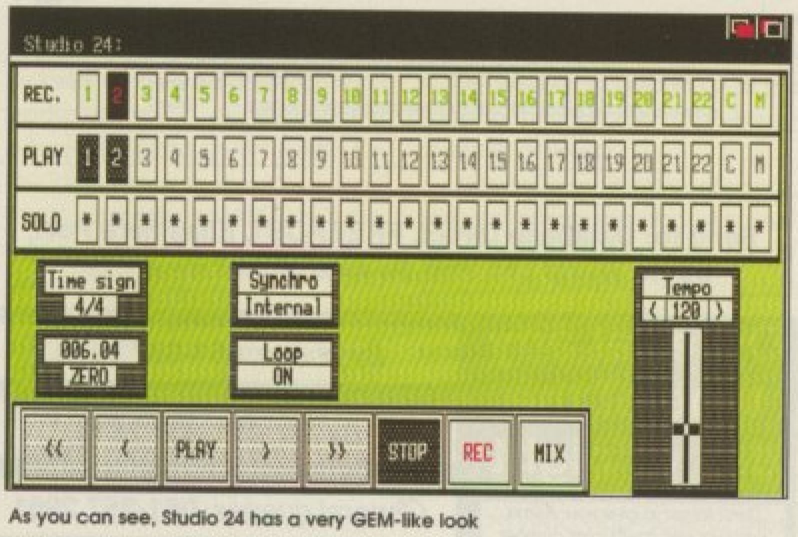
Most of Studio 24's operations are pretty standard, but one feature that is worth mentioning is sequence editing. Studio 24 uses a score-based editor which displays your sequences in the traditional form of minims, crotchets and quavers.

You can edit existing sequences by moving back and forth through the sequence using the cursor keys. You can add notes, delete them, change the pitch and duration of a selected note and even tie notes.

Sounds great so far, but for one major problem – Studio 24 will only allow you to edit a monophonic line of notes, not chords. If your sequence contains chords, the extra notes that make them up are split into their own individual sub-tracks, or voices as Studio 24 calls them. Far from perfect, I'm sure you'll agree.

Song editing is even worse. Most sequencers now use some form of graphical arrangement system, but you'll find no such luxuries within Studio 24. No siree, instead it uses a rather naff non-graphical system which is not only difficult to use, but also rather inflexible. As a result, you may well want to stick to the conventional linear method of song composition.

Notably missing from Studio 24 is support for internal Amiga samples. As we all know, the Amiga can produce some pretty stonking sounds itself, so it's not exactly unreasonable to expect your sequencer to support them. As it is, you're restricted in your music making to those sounds that can be produced by your MIDI setup.



As you can see, Studio 24 has a very GEM-like look

Sound investment?

Studio 24 definitely shows promise, but it unfortunately fails to deliver the kind of sequencing power and ease of use you'd expect from a product at this price.

It's got a few nice features – editing and its unique chord track spring to mind – but in the end it cannot hope to compete against such industry hard hitters as Music-X and Master Tracks Pro.

If Digigram sold Studio 24 at something like £50 I could see it doing well. Unfortunately, there are just too many other sequencing systems around that are both cheaper and far more powerful. As it is, Studio 24 is overpriced and underpowered.

This and the entire range of Digigram Music software is available from GFA Data Media on 0734 794941. Other products in the range include Track 24, Big Band and ProScore.

SUBSCRIBE NOW! TO

AMIGA COMPUTING

- and take your pick from these!

UK ONLY

GASTEINER MOUSE

Essential kit for all aspiring desktop publishers, graphics artists, spreadsheet operators and anyone who takes their computing seriously.

The Gasteiner mouse is a top quality precision product that we're making available at an unbeatable price exclusively to our subscribers.

Yours for only £9.95

RRP ~~£19.99~~

THALION COMPILATION

This mega compilation includes four full-length games PLUS a designer T-shirt!

Chambers Of Shaolin, Warp, Leavin' Teramis and The Seven Gates Of Jambala represent Thalion's first year of blockbusting releases. This amazing package has something for everyone from martial arts to humour and from fun to suspense. You will be swept along in the adventurous journey which will keep you amused for hours. And when you subscribe to *Amiga Computing* this whole package can be yours for free!

FREE!

RRP ~~£24.99~~

CORPORATION

With Corporation you play the role of an agent commissioned from the ZODIAC agency to infiltrate the headquarters of a multi-national conglomerate suspected by the Government of producing dangerous life forms for sale to unfriendly foreign arms dealers.

Use of the lift allows you access to 16 floors which are loaded with security cameras, infra-red beams, damage repair spiders and a whole host of man made cyborgs hell bent on your destruction. It's offered free to *Amiga Computing* subscribers!

FREE!

RRP ~~£24.99~~

SUBSCRIPTION ORDER FORM (including FREE monthly disk)

Please tick the appropriate box

12 months' Subscription – UK *(including monthly cover disc)*

		New	Renewal
UK	£34.95	9505	9506
Europe/Eire	£39.95	9598	9599
Rest of World – Airmail	£54.95	9500	9501

Subscription Offers *(including monthly cover disc)*

Gasteiner Mouse	£9.95	9502
Corporation	FOC	9503
Thalion Compilation	FOC	9504

Name ________________ Signed ________________

Address ________________

________________ Post Code ________________

Daytime telephone number in case of queries ________________

Subscription orders received before March 6 will commence with the May issue

Payment: please indicate method (✔)

☐ Cheque/Eurocheque made payable to Interactive Publications Ltd

☐ Access/Mastercard/Eurocard/Barclaycard/Visa/Connect — Expiry Date ___/___

Send to: Database Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB (No stamp needed if posted in UK)

Order at any time of the day or night

Don't forget to give your name, address and credit card number

By phone: **051-357 1275**

By fax: **051-357 2813**

General queries: **051-357 2961**

Hanging on to his sanity by a thread, our comms guru Fast Eddie hears echoes down the line

Communications

Speak to anyone who has tried comms and not taken to it, and they will tell you it is expensive, time consuming and boring.

They are right about the expense, but there is a certain addictive attraction to the comms habit.

Most people's first encounter with communications tends to be withdrawing money from the local cash dispenser. I guess we have all stood in the rain, waiting for the bank's head office computer to finish calculating the IQ of 1,000 PE teachers, before gleefully advising us that we can't have any money because of a "Technical Fault"

Do not despair! You could well find that directly connecting your Amiga to the telephone network is a much more efficient way to empty your bank account.

Message bases

So what is on offer? By and large, the most common services around the world are bulletin boards. These are computers set up specifically for other computers to call and exchange information.

Common topics to be found online are comms, programming, sci-fi, television, motoring, religion and "adult material". I can't elaborate on the latter, otherwise AC would be on the top shelf next to Meaty Beaty Big and Bouncy, but you can use your imagination.

The information online is generally split into two categories – message bases and file areas.

A message base is, in simple terms, a series of comments input by users of the board related to a particular topic. For example a base called Red Dwarf would be the ideal place to muse over how much you preferred Holly when she was a man, or how badly treated poor old Kryten is.

Depending on how advanced the BBs software is, message bases can be anything from a simple series of sequential messages to a complex web of sub-threads which can be read or skipped at will.

It is possible to browse message bases by following menu options on screen. Input of messages is usually via a simple text editor built into the board.

There are two different types of message bases on larger boards: local ones and the net variety. The trendy term for a message base is echo, so if you read someone talking about an Amiga echo they mean a message area, not some acoustic phenomenon or a local newspaper serving the elderly inhabitants of quaint seaside town Amiga-on-Seamoss.

Local messages are exclusive to the board you are logged on to, whereas net echoes go all over the world. So if you proclaim your love for Lister in a net echo, the comms global village will be asking "What the heck is Red Dwarf ?" in no time.

Net echoes are transmitted worldwide via an elaborate series of telephone calls. Each night while the world sleeps, automatic "netware" is busy collecting and forwarding messages to each board in the network. Indeed some of the inter-net handshaking is positively masonic at times.

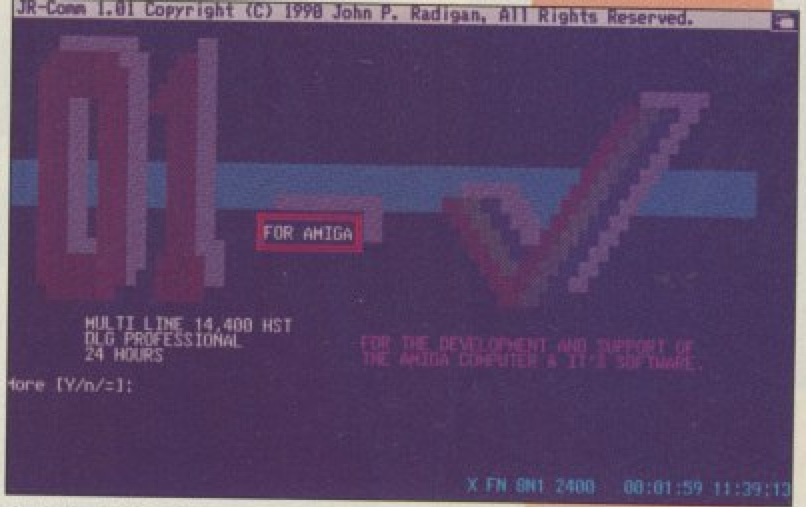
Netmail is an exciting concept, allowing communication with people all over the world for the cost of a local call. It's not in real time, but is still much faster than writing, referred to as snail mail by those with a passion for jargon.

An interesting point to remember is that you don't always have to be logged on to a board in order to read and reply to messages. Better equipped boards often offer the ability to compress unread messages into a single file for you to download before logging off.

Using special offline reader software, it is possible to decompress, read and reply to messages. After keying in replies, the offline reader software compresses them into a packet for uploading the next time you logon.

When the board receives the packet from you it unarchives all your prepared messages and posts them to the relevant people and echoes. This type of message reading is known as blinking. It makes a great deal of sense, saving you phone time and allowing other callers to get on to the board.

File Areas are libraries of computer programs stored on the BBs for its callers to download and run.



An Amiga 3000 is just a phone call away

Again, these programs can be about anything and everything.

Files are downloaded using protocols. These are universal transfer standards designed to allow reliable exchange of data between two points.

A wide choice of protocols are available. By far the most common these days are Xmodem and Zmodem. The newer the protocol, the faster your data transfer will be.

The main thing to remember about protocols is that they have to match at each end of the link. It is no good attempting to initiate a file transfer if your comms software, or the board, doesn't support the protocol you are trying to use. The motto with BBs is most certainly "give and take".

It's all very well to phone a few bulletin boards, read the messages and download any files you fancy, but sooner or later you will be expected to contribute. Not financially, but with a little time and effort.

Message bases aren't really much good without messages, so it is up to the board's callers to fill them up. Similarly, File areas are pretty pointless if they are devoid of files. For this reason most boards insist that you upload a file for every few you download.

After sampling a few boards, it is more than likely that you will consider starting one yourself. I have to be honest and admit that I am by and large unimpressed with the standard of most non-commercial BBs running in the UK.

The file areas tend to consist of a selection of dog-eared PD and shareware programs, while the message bases are more often than not just a total waste of time.

Smaller boards

There are exceptions, of course. A good large scale setup is London-based 01 For Amiga. Tony Miller is the dedicated sysop of this excellent multi-line service. That evasive beast the Amiga 3000 is at the core running Dialog BBS software.

You can have a taste by calling 071 377 1358 (8/N/1)

Smaller, single line boards shouldn't be overlooked either, as they form the backbone of the BBS community around the world. If you want to pop into a tidy, well run, friendly board then give Steve Brazil's Speed BBS a ring on 0734 475549 (8/N/1) Steve is running Speed on a PC with Wildcat! BBS software.

With the possible exception of Dialog, which I have not had a chance to use from the sysop side, most Amiga BBS host software is dreadful. That may seem a sweeping generalisation, but I have yet to see any package which offers the level of sophistication and ease of use presented by Wildcat!

Ear shattering offers for Amiga Computing readers

SOUNDBLASTER

Boost your computer`s sound with an AMIGA SOUNDBLASTER

Make the most of your Amiga's superb sound capabilities by connecting Soundblaster's high quality stereo amplifier and speakers.

Using the latest microchip technology, the specially designed amplifier can deliver an ear-shattering five watts of music power, with twin controls provide complete control over volume and balance.

The fifty watt speakers consist of a woofer, a mid-range and a tweeter for the highest possible sound quality. Thumping bass, crisp trebles: You'll hear them all with incredible clarity.

The Amiga Soundblaster comes complete with mains adaptor and full instructions. No alterations to your computer are required – just plug in and switch on to re-discover sound on your Amiga.

RRP £59.95
ONLY £44.95

Buy all 3 for just £99.95

QUARTET

Make beautiful music on your Amiga

Quartet is a stunning sequencing package that will allow you to compose anything from a jingle to a symphony.

Making full use of the Amiga's unique four channel stereo sound system, Quartet is equally at home playing Depeche Mode or Debussy. Quartet comes complete with complete instructions, a disk of full of sound samples and full source code to allow you to intergrate your tunes into your own programs.

What's more, Quartet is MIDI compatible, so you can connect a suitable keyboard or synthesiser to enter notes directly.

It's the ideal sequencer package to complement the excellent Master Sound sampler

– Amiga Computing, August 1990

Quartet comes with full instructions and two disks for £39.95

Master Sound

Capture any sound you hear and replay it in seconds

It's so easy to use: Simply connect the sampler to your Amiga, load the software and immediately you have the ability to capture sounds with amazing accuracy.

Connect your compact disc player or personal stereo and digitise sounds to incorporate into your own games and tunes.

The supplied software provides complete control over the sampled sounds: Cut and paste them, flip and fade them and you're still only using a tiny fraction of the sound processing tools available.

Best of all, the comprehensive instructions will soon have you creating your own public domain demo disks complete with IFF picture files.

The perfect sound sampling package for beginners and experts alike.

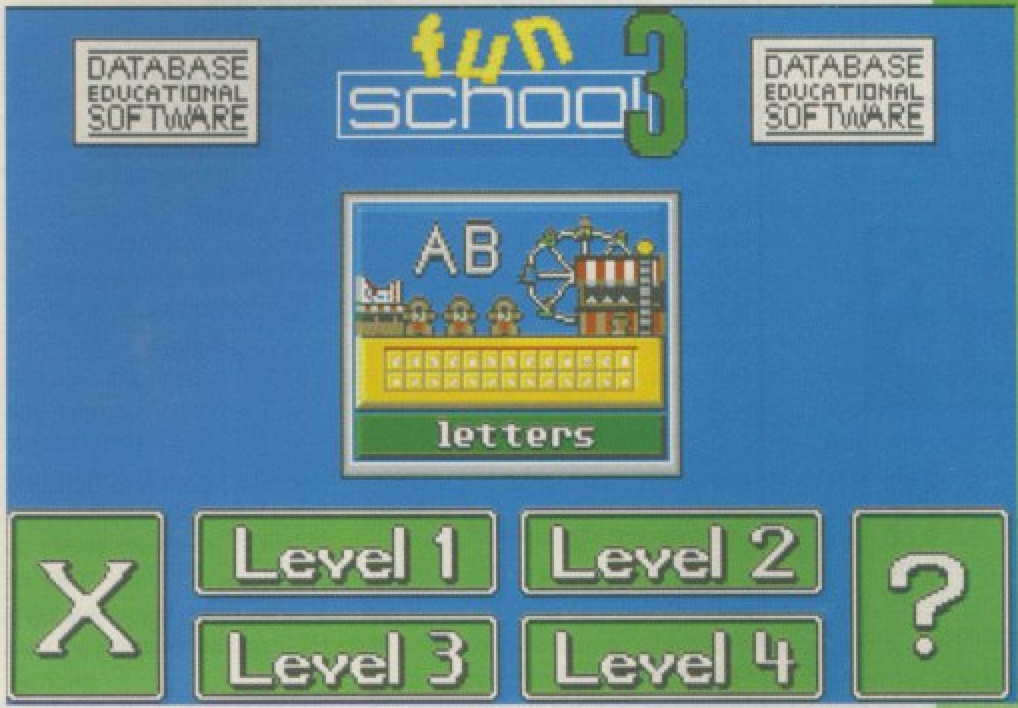
Master Sound is a complete hardware and software sampling system for only **£34.95**

"Is it real or is it Master Sound?"

– Amiga Computing, May 1990

See order form on page 121

After flipping BOBs last month, Peter Hickman gives SPRITES the same treatment and looks at interlaced mode



The latest in the excellent Fun School series

The the CDTV version of Fun School 3 (Under 5s only) is now complete and should be available by the time you read this.

I wrote it in AMOS, so if any of you are lucky enough to pick up one of the little beasties you can see just how versatile this language really is.

After all, if people are using it to write multi-media applications now what will they be doing in another six months?

While on the subject of educational software, Gary Symons, who wrote the AMOS assembler, is currently working on a secret project for Mandarin.

I don't know exactly what it will turn out like, but the ST version is pretty good and could re-define the standards for learning tools on all micros.

I would have loved to bring you a preview of the compiler this month, unfortunately François Lionet is adding some extra features so you will have to wait until next time.

I have been speaking to François and he says that when programs are compiled they will retain all of the multi-tasking capabilities of AMOS. Sounds great, huh?

Lastly on the news front, TOME (the TOtal Map Editor) is now complete. The final package will be available from mid-March, and the manual has been written by me, so it must be good!

Seriously though, it is an excellent product and deserves the support of all programmers, not just AMOS ones. You can find out more about TOME by writing to the AMOS club (the address came with AMOS).

Now on with the programming in the last issue we looked at flipping BOBs. I hope you all saw and understood what I was going on about 'cos I'm gonna start off this column with examples of flipping SPRITES.

First we must load a SPRITE bank from the AMOS extras disk, so stick it in the drive and press escape to go to direct mode.

Load:

```
"AMOS_EXTRAS:SPRITE_600/SPACE/SHIP1.ABK"
```

OK, now let's clear the screen and do some SPRITES. Flash off :

```
Curs Off : Cls 0 Get Sprite Palette
Sprite 1,200,150,1
```

There are two ways to flip this image. The first is quite complicated and involves using BOBs, so I think we will skip that for the time being.

The second method is to flip the image inside the bank using the Paste Bob command.

To do this we must use the Hrev/Vrev in the same way as we saw last month, only we will position the BOB off the screen.

```
Paste Bob 500,500,Vrev(1)
  Sprite 1,200,150,1
```

Simple, isn't it? And now we have a reversed image which we can move around if we wanted to, and there is no need to touch the Paste Bob command ever again (well, not unless you wanted to flip it once again).

Anyway, that's the SPRITEs over and done with.

Now how about taking a look at the very latest version of AMOS 1.23 specifically interlaced mode.

For those of you who don't know too many technical details about the Amiga, interlacing is a method of doubling the amount of information which can be displayed vertically on the screen.

There is a limit to the amount of information which can be shown on a normal monitor because they are actually too slow!

So to double the amount of stuff that can be shown the Amiga takes a single screen and passes the information to the monitor in two sweeps, each encompassing every other line.

So for the first sweep lines 1, 3, 5, 7, 9, 10, 11, 13 etc. are shown, followed by lines 2, 4, 6, 8, 10, 12. This is the reason you get a flicker when in interlaced mode – incidentally the flicker is almost non-existent on NTSC machines 'cos they work faster. That is simplifying things a little, but the principle is sound.

If you are lucky enough to own a Flicker Fixer or an A3000 the Amiga could de-interlace the screens and pass them to the monitor in one go.

Unfortunately you need a very expensive multi-sync monitor to cope with those sorts of speeds, so you can see that interlacing is a bit of a compromise between resolution and quality (and migraines).

OK, to see what difference there is to our display when compared to a normal screen, go to direct mode and type:

```
Screen Open 0,320,200,16,Lowres
"AMIGA COMPUTING"
```

Right, now that we have a normal sized default screen let's compare it to an interlaced one:

```
Screen Open 0,320,200,16, Laced+Lowres
"AMIGA COMPUTING"
```

You will see that I have changed the last parameter to Laced+Lowres, which tells AMOS that we want a lowres interlaced screen. You will also notice that the same number of vertical lines as the first screen are being displayed in half the space. Also check the flicker.

Now one problem with this mode is that when you set up a single interlaced screen all other screens which you may be displaying are automatically "switched" into interlaced mode. These are not true interlaced screens – they just flicker for the hell of it!

You can display some excellent quality pictures in this mode, so do make use of it. But don't even think about doing a game in interlaced, it's just too slow.

Something which you might like to dwell on is that perhaps in the future Francois Lionet will include a facility to use some of the new screen modes thought up by companies such as Newtek, the people who make the fabo digitisers.

● *Anyway that's it for this time. Next month it's the compiler – I promise!*

ADVERTISERS' INDEX

AMIGA COMPUTING

READER OFFERS

A VIDI SPECIAL OFFER

SAVE £15

Thanks to a breakthrough by Rombo Productions in frame-grabbing technology, you can now produce good colour images quickly and cheaply with Vidi-Amiga and the VidiChrome colour software.

- ***Take snapshots in 16 shades live from video***
- ***Multiple frame store***
- ***Dynamic cut and paste***
- ***Full palette control***
- ***Hardware and software control of brightness and contrast***
- ***Compatible with all video standards***

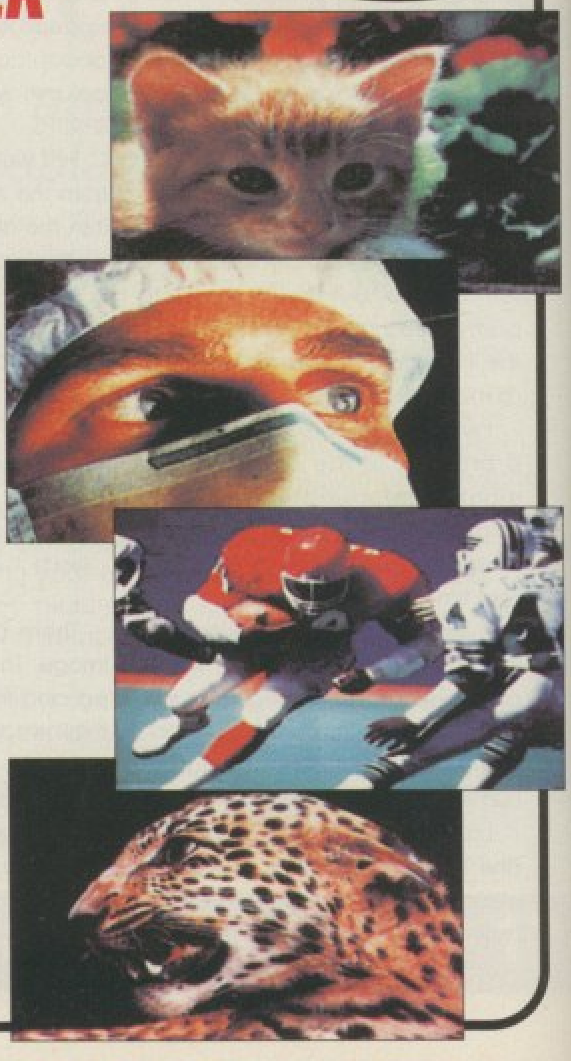
FULL PAL SCREENS

"Also available – Vidi-RGB Colour Splitter. The splitter is an electronic filter which takes a colour video signal and separates it into the three primary colours, allowing each to be digitised. Replaces the need for a conventional filter set and ideal for use with Vidi Amiga and VidiChrome Amiga".

Vidi Colour Splitter
RRP £69.95*
OUR PRICE
£54.95
SAVE £15

Vidi-Amiga/ VidiChrome ST
RRP £134.95*
OUR PRICE
£119.95
* Includes colour upgrade worth £19.95

"Vidi must be one of the most exciting peripherals you can buy for your Amiga" – *Amiga Computing, March 1990*



See order form on page 121

Code Clinic

Beam up with Margaret Stanger and take a viewport into C

Last month Code Clinic contained software to produce Intuition windows and screens, but it is possible to create a display using some routines from the graphics library known as graphics primitives.

This system gives you more freedom, more control, and a little more hassle.It would be possible to write whole books on the subject of how the display system works, so I have tried to summarise it as best I can. You will find all the bits I missed out in the ROM Kernal Manual- Libraries and Devices.

The Amiga coprocessor – or copper – produces its video displays on TV screens or monitors using raster display techniques. The picture consists of a series of horizontal lines stacked on top of each other.

Changes can be made to the display when the beam is going from left to right as it is turned off on the flyback. When the beam reaches the bottom right hand corner of the screen it flies back to the top left hand corner.

In a multitasking environment each program can have direct control over the copper and therfore over the whole display or View.

The View can be divided into one or more viewports, each of which is the equivalent of an Intuition screen. Each viewport has its own display resolutions, colours and special features. Unlike Intuition screens they can all be displayed at once.

Because of hardware limitations, segments of differing display modes are confined to horizontal stripes that extend across the complete width of the screen.Each viewport completes a horizontal segment, and they are separated from each other by at least one blank line.

Images are created by drawing into a computer memory area so that the system can retrieve the data for the display.The system software allows you to define linear memory as rectangular regions called bitplanes.

It is necessary to tell the system the dimensions and location of these bitplanes. This is a pain but there is the advantage of keeping several displays in memory at the same time.

The colour of each pixel is related to the value of one or more data bits in memory. To create multicoloured images, the system must be told how many bit are required per pixel.

In my first Viewport(blue), I have used eight colours and three bitplanes, and the system retrieves one data bit from each bitplane.

For each pixel data bits in the same horizontal and vertical position are combined by the system to create a binary value which determines the display color for that pixel.

The system uses a structure called a bitmap which contains the height, width and depth of the bitplanes and where they are in memory.

The display is created from a set of instructions in the view structure, which is initialised using the command InitView, and linked to the first viewport.

Each viewport is initialised with default values, and its own parameters are added later:

Each Viewport needs a RasInfo structure containing a pointer to the bitmap with the bitplane information. If the viewport has dual playfields the first RasInfo contains a pointer to the next RasInfo, which has a pointer to the second bitmap.

The picture in memory can be larger than the screen image by creating a bitmap larger than the viewport area. The RasInfo structure has the offsets for the relative position of the display to the complete picture. In this example the bitplanes are the same size as the viewports, and the offsets are zero.

Left to itself the system will use default colours. There is a command GetColorMap which will allocate space for a colourmap and return a pointer to it.

The colourmap has a pointer to the colourmap's colourtable, and the desired colours can be copied into this data structure.

Each bitmap is initalised using InitBitMap with the required width,height and depth as inputs. The command AllocRaster is used to allocate each bitplane and the returned pointers are linked to the bitmap.

Now that all the data structures are complete the command MakeVPort asks the system to make a set of display instructions – or copper list – from the structures in the Viewport. This has to be done for each ViewPort.

The command MrgCop merges these copper lists into a single instruction list. LoadView turns on direct memory access (DMA) and the display will be shown on the screen. Any flicker can be reduced by waiting for the beam to reach the top of the frame.

Each area can have its own set of drawing instructions, or RastPort structure. InitRastPort puts in default values and when the RastPort has been linked to its bitmap it is possible to use the Graphics Library drawing commands.

The listed program first saves the address of the old view using the gb–ActiView offset from the graphicsbase. The view is initalised and three viewports produced.

The first viewport is 48 lines high with eight blue colours and three bitplanes. The second is 100 lines high with dual red and grey playfields. The third viewport is 48 lines high with 32 green colours and 5 bitplanes.

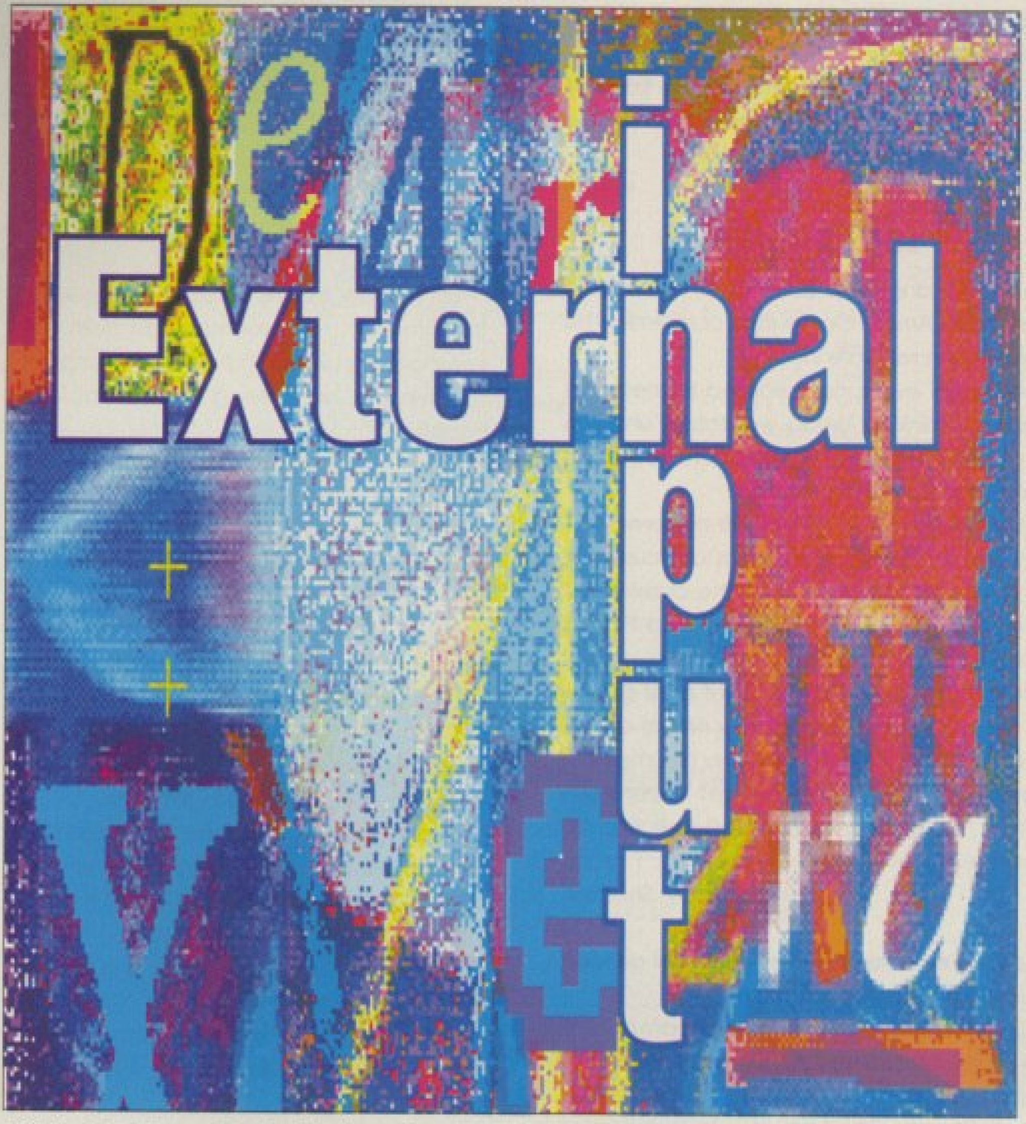
The drawing routines have been used to produce a series of rectangles on the screen. In the second viewport the grey playfield is dominant except for transparant areas of colour zero.

There is a short delay before the first eight colours of each viewport are cycled, and another delay before the program releases the allocated memory, replaces the old View, and exits.

The support disc includes the source and object code for this program and a list of documented routines from the graphics library.

Height	how many video lines	
Width	320 pixels in low res, 640 in high res	
Next	pointer to the next Viewport	
Modes:	*DUALPF*	for two separately controlled playfields
	PFBA	the second playfield takes precedence
	HIRES	more precise horizontally (640 pixels)
	LACE	interlaced display mode HAM hold and modify colours
	SPRITES	hardware sprites
	VP–HIDE	obscures the viewport
ColorMap	has a pointer to the colour table of up to 32 colours. Three bitplanes would use colour registers 0-7, five bitplanes registers 0-31. Dual playfields of three bitplanes each would use registers 0-7 for the first playfield and 8-15 for the second.	
RasInfo	pointer to the RasInfo structure.	

● NEXT MONTH: Scroll routines made routine.



Write to Ezra Surf, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP

Money for nothing?

How, if you are not allowed to sell PD disks, do the various PD companies survive? How can they afford to advertise in your magazine and send people glossy catalogues?

Are all these things accounted for in the "expenses" area, like the wages for staff etc.? Can anyone start a PD service or is there some kind of licence?

Finally why have you stopped putting in the marks for games that you review?

Keep up the good work, your magazine is 97 per cent.

Paul, Cumbria

PD Libraries should not exist to make a profit, but it is reasonable to expect a small surcharge for any disks ordered, to cover postage, duplication time, administration and the like.

As libraries get bigger they can make economies, buying disks, envelopes and even postage in bulk. This sometimes leads to a little slush fund, which can be blown on extravagances like wages and even the odd advert or two.

You don't need a licence to set up a PD library, just a lot of time and energy to do it properly.

We told our games reviewers that they could have their joysticks back if they started putting scores on again – seems to do the trick.

Free for all

I think that free software should be free. Everyone talks about wonderful PD software saying that it's free, but everywhere you look someone is selling it for around £3 a disk.

I think this is very wrong. To change this, myself and a few friends have decided to run a public domain club which will supply PD for nothing.

J Duncan, Kent

It's a very nice idea, something for nothing. However, you will have significant expenses to consider. Where, for example are you going to find money for disks and postage?

PD software should be free, that doesn't mean that the media and handling is. £3 a disk is a tad on the pricey side though, so shop around.

Better still, call a bulletin board and the only cost involved could be a local phone call. If you are serious about being a PD supplier, maybe you should consider starting a board.

Limited edition

I was torn between upgrading my Amiga 500 into an A1500 expansion box with a hard disk or exchanging my Amiga 500 for a Commodore Amiga 1500.

After talking at some length to a Commodore representative, I was told that the A1500 was a brand new machine, ideally suited for games and business use.

On arriving home and unpacking the system, I find on the back an A2000 label. It would appear that all Commodore have done is rebadge an Amiga 2000 and put in a second disk drive.

They have called it almost the same as an expansion unit developed by a third party to ensure confusion. Have they done this because they could not think of casing an A500 in such a professional way?

I have since returned my Amiga 1500/2000, and purchased an A1500 limited expansion system, with which I am very happy.

Lorraine Ferrer, Middlesex

You are correct in asserting that the Amiga 1500 is a rebadged dual floppy 2000. Commodore have never really claimed otherwise.

The 1500 package is ideally suited for games and business use. At £999 including colour monitor, it is the bargain of the decade so far.

The third party A1500 allows you to separate the Amiga keyboard and main processor box, but you don't have the advantage of several expansion slots and an up-rated power supply unit.

Most people are actually pleased to find that they have bought a 2000 in disguise. You though obviously feel you have been conned by Commodore.

The A1500 was a logical name for CBM to choose for the package, it is after all in-between the 500 and the 2000, and the A1000 has been and gone. A1500 sounds more like a Commodore name to me than a third party one.

I hope you and your A1500 limited expansion have many happy hours together – it, too, is a worthwhile product in its own right.

Arresting reading

I've just been into the shop which sells your magazine. As I was glancing through it I decided I wanted it. I searched through my pockets and realised I didn't have enough money to buy it, so I stole it.

When I got home I put the disk into my paid for computer and gasped! Tremendous! Incredible!

The mag and disk are excellent value for money. The trouble is my family won't let me on the computer. Now I'm wondering where I can get £2.95 for the next issue.

I shall have to stop the kids' spending money for my next issue. Keep up the good work. And for obvious reasons please don't print my real name.

Bill Sykes, Bradford.

I assume you realise that if the barcode on the front cover isn't scanned by your newsagent, a rather curious virus is let loose on your system?

It systematically causes you to form an addiction to the magazine which is so powerful that you can't help but subscribe.

Seriously though, *Amiga Computing* is not

public domain! If you did steal us, please don't try it again.

It is only a matter of time before you get caught and then it will be more than finding £2.95 you will have to worry about.

Play the game

I read with anger the letter by Chris Webb in issue 29 of *Amiga Computing* concerning his views on the software industry.

Although everyone is entitled to their own opinion, I think Mr Webb was totally unfair in his assessment that 99.9 per cent of Amiga games are trash.

True, there is and always will be some rubbish on the market, but he has obviously not experienced the delights of the classics like Dungeon Master, Gettysburg and Power Monger.

If he has played 99.9 per cent of all games on the market he is either very rich or a software pirate. Therefore, I can only assume he is commenting on games he has never seen before, let alone played, and thus has no clear idea of what he is talking about.

Stuart Hardy, Sheffield

You don't have to play a game to get an idea of whether you will like it or not.

Some people simply detest games. For these demented creatures, even the most technically stunning release will fail to raise the slightest tingle of emotion in their trigger finger.

Of course not all Amiga games are trash. If they were people wouldn't be able to tell the Amiga apart from that ST thingy.

Excellent review

I enjoyed your review of the wonderful Excellence! wordprocessing program in the March issue. Your praise of it was well earned, but one part of the review was misleading.

You criticise the lack of an overtype facility, which you say is missing from the program. In fact this is not the case as by simply highlighting the text that you wish to overtype and then entering the new text, the program replaces the old with the new.

It must be just about the best wordprocessor available on the Amiga and readers shouldn't be put off by the price: there are some very good mail order deals available. The only trouble that I have with it is that I spend time exploring its capabilities that I should be using for writing.

D M Fieldhouse, Liverpool

The process of highlighting a text block with the mouse and then replacing it by typing in new text isn't strictly speaking an overtype mode. For example, anyone who uses a wordprocessor for long periods of time and who requires speed above all else, the use of the mouse is a no-no.

When using Protext, for instance, I configure it to Overwrite mode instead of Insert. That way if I make a mistake in typing, which I often do and which I usually notice as it's done, I can type straight over the top of it without having to delete or resort to the mouse.

I'm glad you liked the review, and we did, as you say, conclude that Excellence 2.0 is one of the best on the market. As for the price, we quote the RRP as it would be unfair to a product to quote the cheapest price we could find. Hope you continue to enjoy exploring you wordprocessor's power (and buying our mag - Ed).

Snail mail mouse

I am writing to you to tell my woeful story about a Naksha mouse.

It all began when I ordered the little chap from a mail order company called Microsmart. This was in about November, 1990.

By January this year I had not received the product, nor any message from the company, so I wrote to them expressing my annoyance, and asking them what had happened.

I tried to contact them by telephone, but all I got was their ansaphone. Finally, I wrote them another letter. The result? Nothing.

What can I do apart from fume with the poor quality of the mouse that I got with my Amiga 500 which I bought a year ago. Yours feeling peeved, to put it mildly.

Iain Chambers, Peterborough.

Yours is just one of many mail order gripes I receive in the postbag every month.

Although we do our best to ensure that each of our advertisers is honest, legal and decent, we cannot really check out the service offered on an individual basis.

I gave Microsmart a quick ring to see what the problem was with your order. They told me that your rodent started scurrying its way to Peterborough the day before you called.

Your original order from November last year apparently got a little lost in the pre-Christmas stampede, for which they are sorry.

You have every right to be a bit peeved, but hopefully similar things won't happen again. Hope you think the mouse was worth the wait.

Fair shares all round

I know you regularly print such statements, but I'd like to make a point about shareware.

Always pay for any shareware you end up keeping and using. If you don't, the people who write it will have to find some other way to make a living and won't be able to update their programs, or create new ones.

You may save a bit in the short term, but you'll lose in the end and end up paying for software you may never use because there are no good shareware alternatives available.

The UK has a poor reputation for this. Come on fellow Brits, let's show the Yanks that we're just as honest as they are.

Finally, I know that you manage to pack as much quality into your slimmer mag as your biggest rival, but my latest copy has pages 67 through 101 missing. Can you help?

Bill Dawson, Southampton.

I can't agree more on what you are saying about shareware.

Yes we do print letters like yours regularly, but it is always worth reminding people to put their money where their mouse is.

I am sure most people intend to cough up for the software, but never quite get around to it. There is no excuse for not going to the bank and sorting out a money order tomorrow, so do it people!

As for the mystery of the missing pages, I wonder if Bill Sykes uses the same newsagent as you?

Stealing an entire magazine is utterly pedestrian compared to the style and nerve required to make off with just the pages of interest.

Consider the missing pages in the post. I might even send a complete magazine.

Trojan Trauma?

I recently purchased a copy of *Amiga Computing* issue 34. On the CoverDisk was a program called "Kill Da Virus". I installed this program on all my bootable disks.

Since doing this I have had nothing but trouble with a virus called "Smiley Cancer" which turns the mouse pointer into a face and has corrupted much of my public domain.

It seems to me that the only place this virus could have come from is your CoverDisk as I have had no trouble of this kind before. I would like to know if you have received any other complaints of this nature.

I will not be buying your magazine again until this matter is sorted out. If I do not hear from you I will have to write to another magazine.

Ian Simllan, Sheffield.

The *Amiga Computing* CoverDisk was not the source of the virus you are afflicted with.

Our erstwhile disk editor, Stevie Kennedy assures me that the AC disks are so clean you could eat your dinner off them.

We are not a virus carrier. Any allegation that our magazine distributes these anti-social beasties will, quite rightly, be taken very seriously by our readers.

It is important to be sure of your facts before initiating such grave rumours.

AMIGA COMPUTING READER OFFERS

Offers subject to availability

Back Issues

Nov 1990	£3.10	*9729*	☐
December 1990	£3.10	*9730*	☐
January 1991	£3.10	*9731*	☐
February 1991	£3.10	*9732*	☐
March 1991	£3.10	*9733*	☐
April 1991	£3.10	*9734*	☐

All these back issues include cover disk.

Bargain bundle

Six issues of Amiga Computing (Nov-April)	£17.00	*9957*	☐
†Add £3 Europe & Eire/£12 Overseas			☐

Rombo Vidi

NEW

Vidichrome plus Colour upgrade	£119.95	*9891*	☐
RGB Splitter	£54.95	*9940*	☐

Protext Version 4

£79.95 *9530* ☐

Hi Soft Basic Compiler + Library

£69.95 *9896* ☐

Photon Paint 2

OFFER OF THE MONTH!

RRP £54.95 **Our Price £34.95** *9944* ☐

Battery charger

£19.95 *9861* ☐

Plus post and packing £1.50 ☑

Rolling Ruler – *See Page 114*

£5.95 *9930* ☐

Amiga Music – *See Page 116*

Soundblaster	£44.95	*9912*	☐
Quartet	£39.95	*9913*	☐
Master Sound	£34.95	*9914*	☐
Package of all three	£99.95	*9915*	☐

(See page 110)

Amiga DABhand Guide

A comprehensive guide to the Amiga's disc operating system (version 1.2 and 1.3) £14.95 *9866* ☐

Mail Order offers

Extra discs (set of 5)	£7.50	*9887*	☐
Extra discs (set of 20)	£20.00	*9888*	☐
Publishers Choice	£79.99	*9867*	☐
Home Accounts/Day by Day	£34.90	*9851*	☐
ArgAsm	£54.95	*9858*	☐
Flight Simulator	£35.95	*9868*	☐
Pair of Scenery Discs	£31.90	*9872*	☐
Lotus Esprit	£19.95	*9946*	☐
NEW James Pond	£19.95	*9947*	☐
Jane Seymour	£19.95	*9948*	☐

Disc Bargains

Chess Simulator	£19.95	*9932*	☐
Welltris	£19.95	*9933*	☐
American Dreams	£17.95	*9934*	☐
Future Dreams	£17.95	*9935*	☐

Mavis Beacon Teaches Typing

RRP £29.95 **Our Price £22.95** *9953* ☐

Personal Finance Manager

£24.95 *9942* ☐

Joysticks & Mouse

NEW

Comp Pro Glo Green	£14.95	*9954*	☐
Comp Pro Extra Joystick	£13.95	*9955*	☐
Gasteiner Mouse	£19.95	*9956*	☐

Dust covers – *See Page 114*

£4.95 *9507* ☐

Mouse mats – *See Page 114*

£4.95 *9508* ☐

Binders – *See Page 114*

£5.95 *9509* ☐

Disc boxes

£4.95 *9860* ☐

Addition for postage: Europe & Eire add £3 ☐
Overseas add £5 ☐
Unless otherwise indicated

TOTAL ______

Send to: Database Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB

(No stamp needed if posted in UK)

Products are normally despatched within 48 hours of receipt but delivery of certain items could take up to 28 days

ORDER at any time of the day or night

By phone: 051-357 1275

By Fax: 051-357 2813

General Enquiries: 051-357 2961

Don't forget to give your name, address and credit card number

Payment: Please indicate method (✓)

☐ Cheque/Eurocheque made payable to **Database Direct**

☐ Access/Mastercard/Eurocard/Barclaycard/Visa/Connect

Expiry Date: ___ / ___

No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Name .... Signed ....

Address ....

.... Post Code ....

Daytime telephone number in case of queries..

AMC5

MASTER
S·O·U·N·D

Sound sampling Hardware and SOFTWARE for the AMIGA

AMIGA COMPUTING MAY ISSUE 93%
AMIGA FORMAT – "It produced some of the best quality sound samples I have ever heard"

WHAT IS MASTER SOUND?

MASTER SOUND is a low cost, high quality sound sampler for the AMIGA range of computers featuring advanced Sampling/Editing/Sequencing software. MASTER SOUND enables you to record sounds from devices such as Personal Cassette or Compact Disc players into the AMIGA. When in the Computer, MASTER SOUND'S unique editor will enable you to edit the sound in practically any way you can imagine. Once you have the sample how you want it, you may incorporate it into your own Demo's or programs or use MASTER SOUND'S own BUILT IN sample sequencer to play back the sample along with a number of others too!

THE MASTER SOUND EDITOR

incorporates the following facilities:

★ SAMPLE	★ PLAY	★ PREVIEW	★ LOOP
★ CUT	★ COPY	★ OVERLAY	★ WIPE
★ FADE IN	★ FADE OUT	★ VOLUME	★ REVERSE
★ SHRINK	★ FILTER	★ MAGNIFY	★ TRIGGER
★ LOAD	★ SAVE	★ RAW FORMAT	★ IFF FORMAT
★ SCOPE	★ FFT	★ VU METER	★ SEQUENCER

The impressive realtime Spectrum Analyser and Oscilloscope enable the user to monitor frequency content and volume with ease and help you to ensure that the sample quality is at its best.

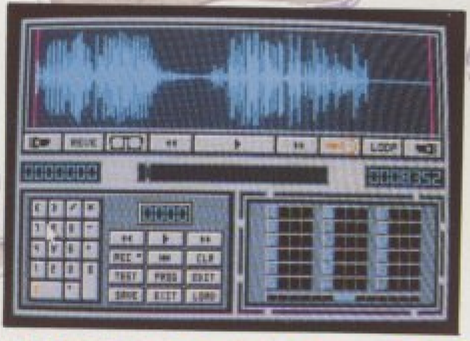
THE MASTER SOUND SEQUENCER*

Allows you to play back samples in a sequence. Multiple samples can be held in memory at once and sequences are as simple to record as tapping keys on the computer's keyboard. Once recorded, the Sequencer can save the samples and sequence file out onto disc so that the files can be used in your own demo's.

THE MASTER SOUND DEMO

Allows you to play back your own sequenced sounds from the sequencer while displaying IFF picture files. This is great for creating your own public domain demo discs without having to be a computer programmer!

Manufactured in the U.K. · Unauthorised Copying is Prohibited · MICRODEAL Ltd



MASTER SOUND EDITOR

microdeal

MASTER SOUND ORDER FORM

Master Sound is £39.95 post & packing £1 (all prices inc V.A.T.)

BY PHONE WITH CREDIT CARDS

(0726) 68020

BY POST: with Cheque · Postal Order · or Credit Card

Name ....

Address ....

.... Post Code ....

Credit Card Type .... Expiry Date ....

Number ....

Please allow 28 days for delivery

Send to: Microdeal · PO Box 68 · St Austell · Cornwall · England · PL25 4YB